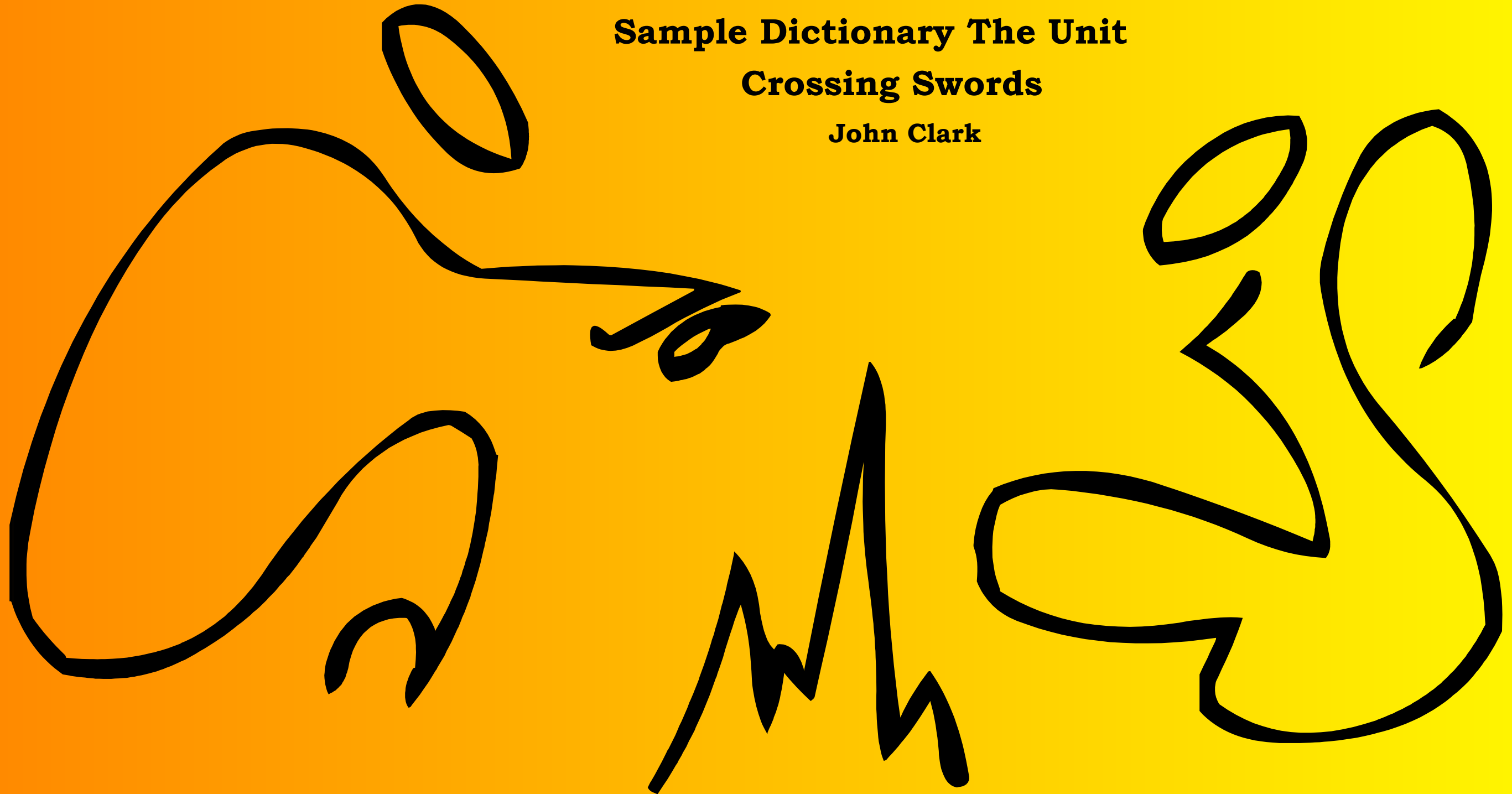


# Basic Analog Grammar

Sample Dictionary The Unit

Crossing Swords

John Clark



John 312



If we establish a simple convention of names, leaving out the fact that this convention impls a arbitrary method of division, we get a simple arithmetic result.

Given.

Unit.    $ab := 1$      $N_1 := 3.45282$      $N_2 := 1.56348$

Descriptions.

$$cd := \frac{N_2}{N_1} \qquad de := \frac{N_2 \cdot cd}{1 - cd}$$

$$be := N_2 + de \qquad R := be$$

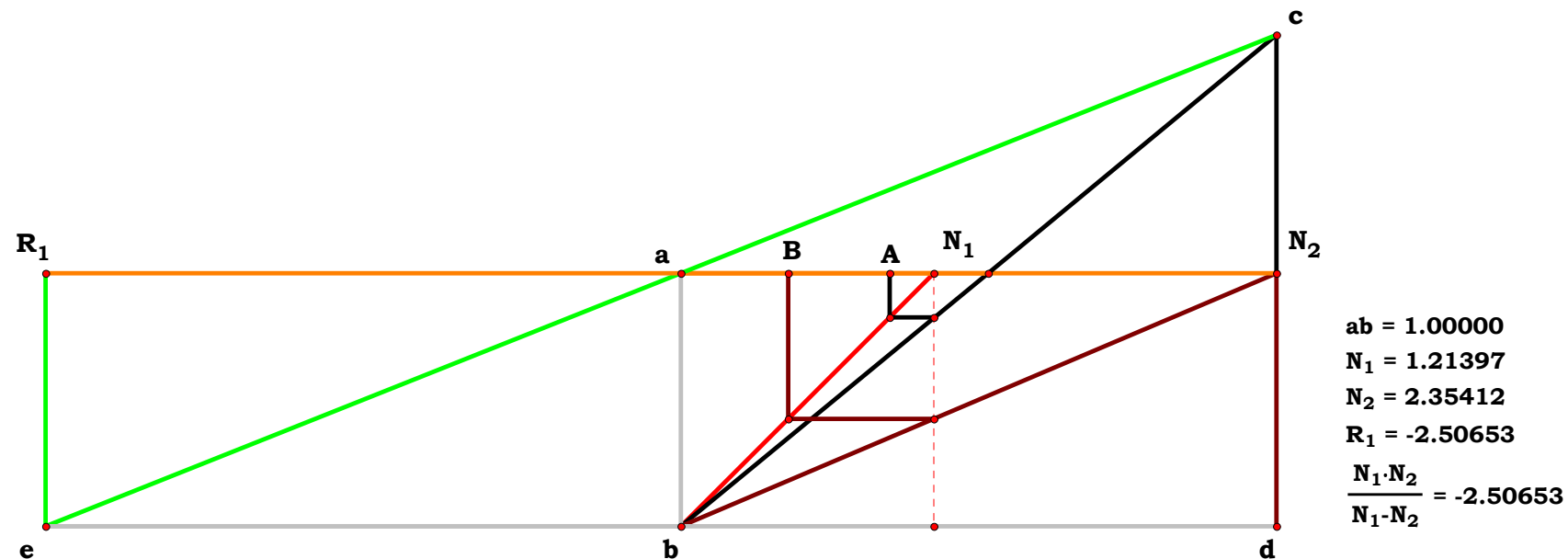
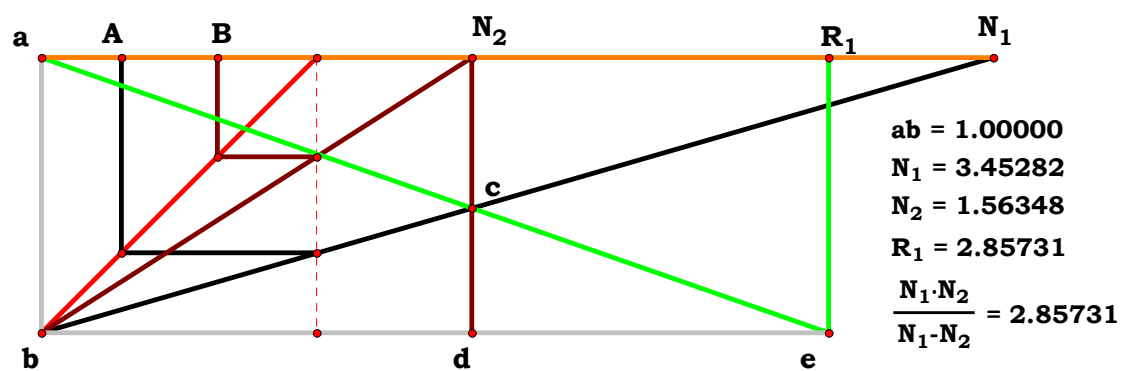
$$R = 2.857302$$

Definitions.

And this result will reduce to this definition.

$$R - \frac{N_1 \cdot N_2}{N_1 - N_2} = 0$$

But something is wrong. The more complex the equations become, every once in a while, we have to insert logical operators, and we accompany them with mythology. What can be wrong?



  
1CST1R0B

**Given.**

**Unit.**  $\mathbf{ab} := 1$

$$\mathbf{N}_1 := 3.79518 \quad \mathbf{N}_2 := 1.56348$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2}$$

### Descriptions.

$$\mathbf{cd} := \frac{\mathbf{N}_2}{\mathbf{N}_1} \qquad \mathbf{de} := \frac{\mathbf{N}_2 \cdot \mathbf{cd}}{1 - \mathbf{cd}}$$

$$\mathbf{be} := \mathbf{N}_2 + \mathbf{de} \quad \mathbf{R}_1 := \mathbf{be}$$

$$\mathbf{R}_1 = 2.65882 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$

### Definitions.

**We start with our original arithmetic result,**

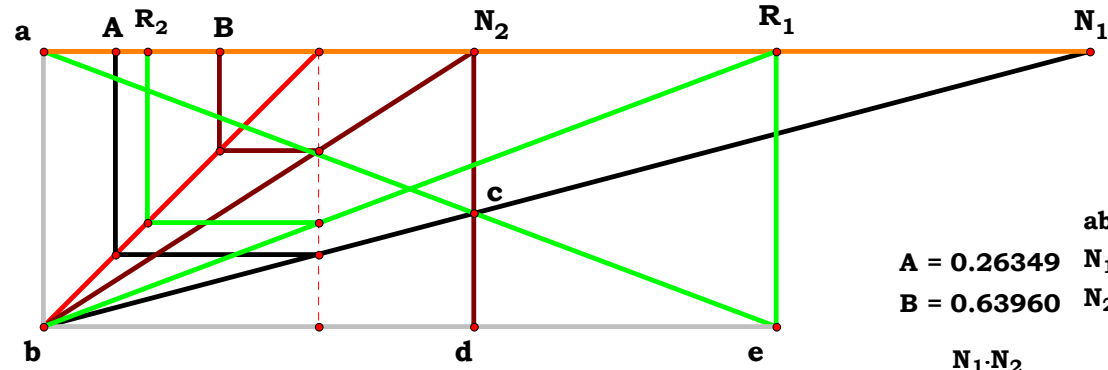
$$\mathbf{R}_1 - \frac{\mathbf{N}_1 \cdot \mathbf{N}_2}{\mathbf{N}_1 - \mathbf{N}_2} = 0$$

**Transform the rest of our givens like such**

$$\mathbf{N}_1 - \frac{1}{\mathbf{A}} = 0 \qquad \mathbf{N}_2 - \frac{1}{\mathbf{B}} = 0$$

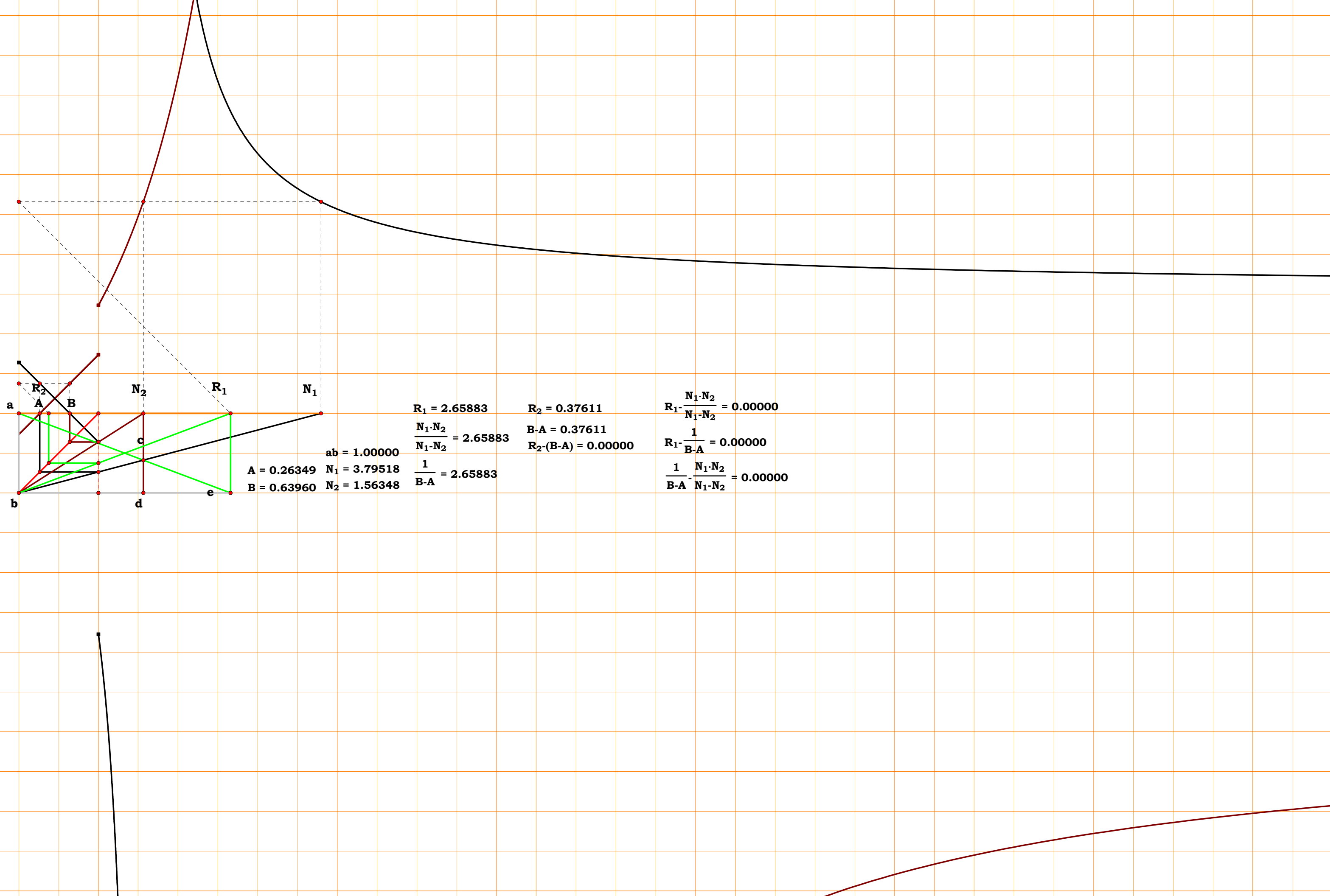
**Making our substitutions we get a completely different equation where any value whatsoever can be plugged into  $N_u$  and the arithmetic result will not change, ever. So, in our first plate, we got a particular result, where here, we get a result that is apparently universal for any base system used in math.**

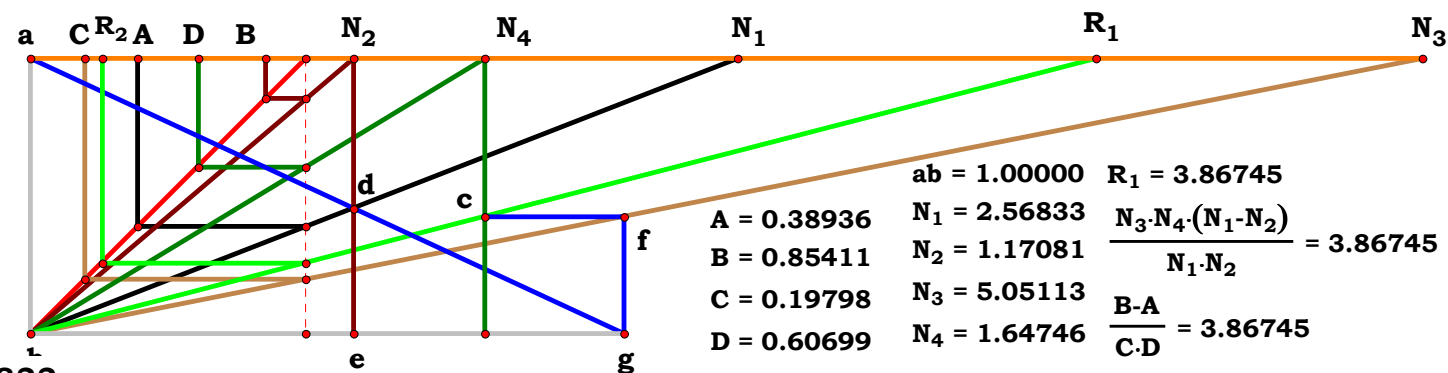
$$\mathbf{R}_1 - \frac{1}{\mathbf{B} - \mathbf{A}} = 0 \quad \mathbf{R}_2 - (\mathbf{B} - \mathbf{A}) = 0$$



	$R_1 = 2.65883$	$R_2 = 0.37611$
	$\frac{N_1 \cdot N_2}{N_1 - N_2} = 2.65883$	$B-A = 0.37611$
$ab = 1.00000$		$R_2 - (B-A) = 0.00000$
$A = 0.26349 \quad N_1 = 3.79518$	$\frac{1}{B-A} = 2.65883$	
$B = 0.63960 \quad N_2 = 1.56348$		
$R_1 - \frac{N_1 \cdot N_2}{N_1 - N_2} = 0.00000$		
$R_1 - \frac{1}{B-A} = 0.00000$		
$\frac{1}{B-A} - \frac{N_1 \cdot N_2}{N_1 - N_2} = 0.00000$		

If, however, we remember that arithmetic depends upon complete induction and deduction of the unit, then the unit must always be preserved, or we can figure out that every grammar system depends on complete induction and deduction of a unit, or standard thing, we can then figure out how to do the math right.





### Descriptions.

**Unit.**  $ab := 1$      **Given.**  $N_1 := 2.56833$

$$N_2 := 1.17081 \quad N_3 := 5.05113 \quad N_4 := 1.64746$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3} \quad \mathbf{D} := \frac{1}{N_4}$$

$$\mathbf{BE} := \mathbf{N}_2$$

$$\mathbf{bg} := \frac{N_1 \cdot N_2}{N_1 - N_2} \quad \mathbf{fg} := \frac{\mathbf{bg}}{N_3}$$

$$\mathbf{R}_1 := \frac{N_4}{f_g} \quad \mathbf{R}_1 = 3.867446 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$

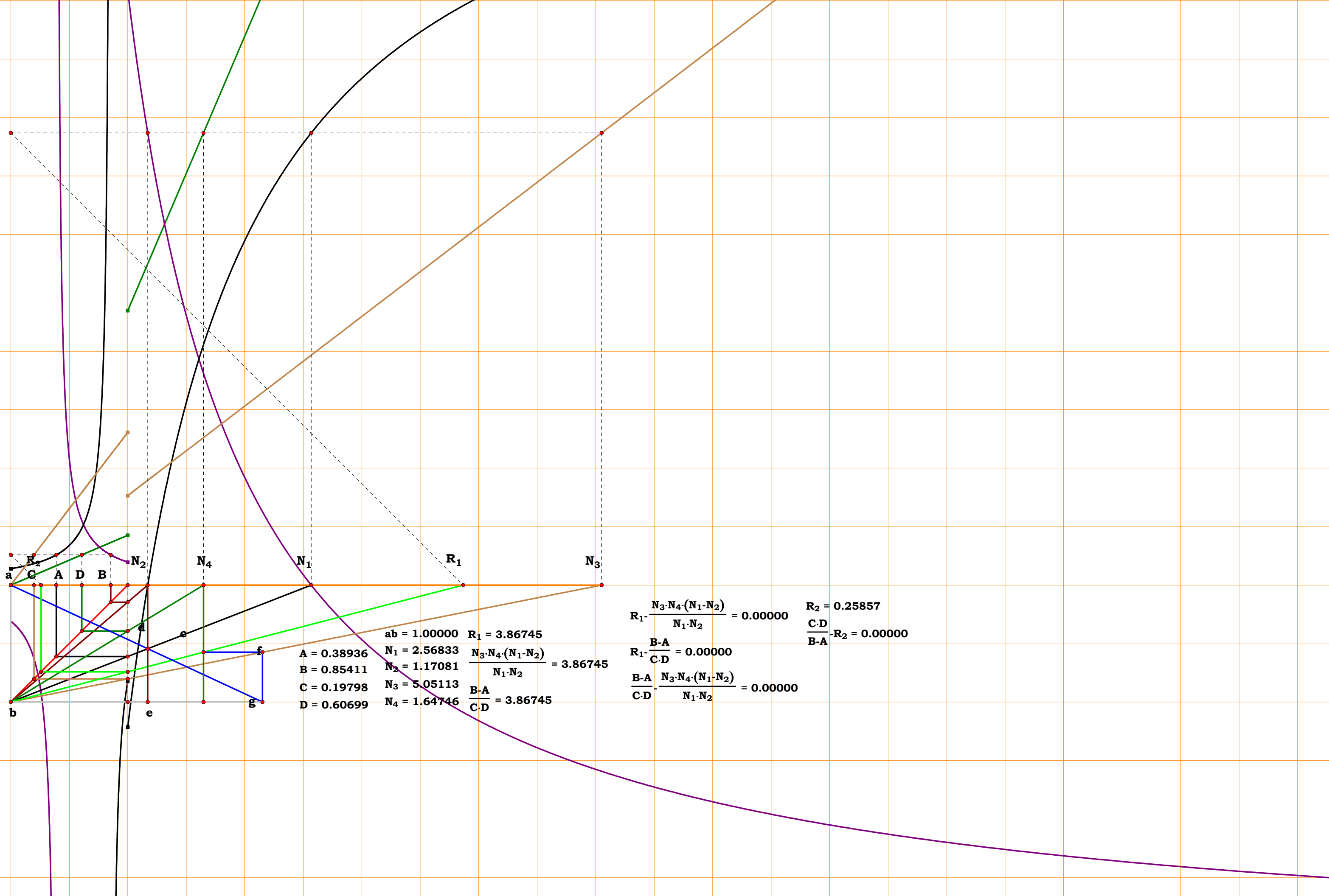
### Definitions.

$$R_1 - \frac{N_3 \cdot N_4 \cdot (N_1 - N_2)}{N_1 \cdot N_2} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0 \quad N_4 - \frac{1}{D} = 0$$

$$R_1 - \frac{(B-A)}{C \cdot D} = 0 \qquad R_2 - \frac{C \cdot D}{(B-A)} = 0$$

$$\begin{aligned} R_1 - \frac{N_3 \cdot N_4 \cdot (N_1 - N_2)}{N_1 \cdot N_2} &= 0.00000 & R_2 &= 0.25857 \\ R_1 - \frac{B-A}{C \cdot D} &= 0.00000 & \frac{C-D}{B-A} \cdot R_2 &= 0.00000 \\ \frac{B-A}{C \cdot D} - \frac{N_3 \cdot N_4 \cdot (N_1 - N_2)}{N_1 \cdot N_2} &= 0.00000 \end{aligned}$$





**Unit.  $ab := 1$      $N_1 := 2.66919$**

$$\mathbf{N}_2 := 1.24111 \quad \mathbf{N}_3 := 5.47105$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3}$$

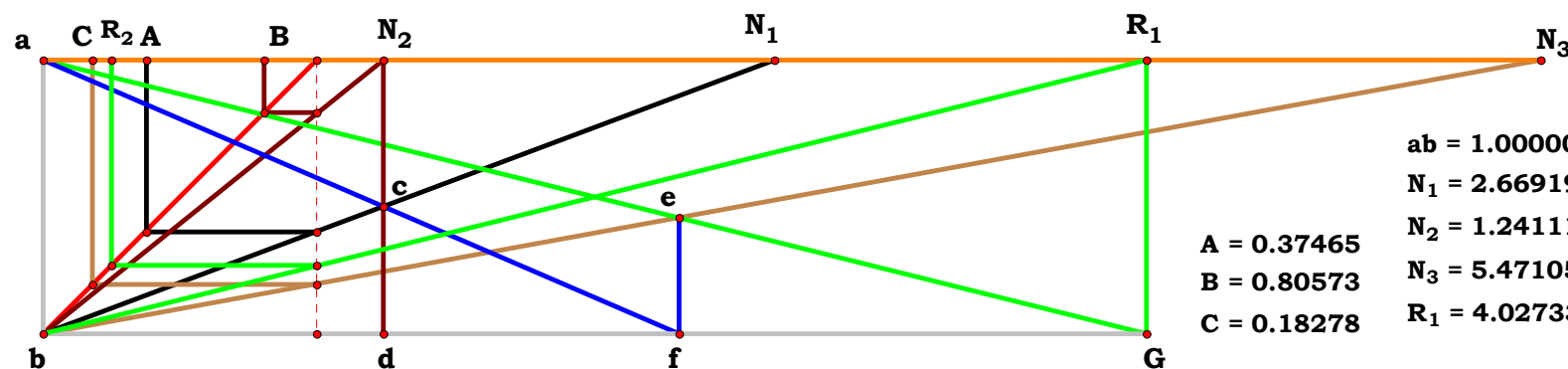
$$\mathbf{bf} := \frac{N_1 \cdot N_2}{N_1 - N_2} \qquad \mathbf{ef} := \frac{\mathbf{bf}}{N_3}$$

$$\mathbf{R}_1 := \frac{\mathbf{bf}}{1 - \mathbf{ef}} \quad \mathbf{R}_1 = 4.027312 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$

$$R_1 - \frac{N_1 \cdot N_2 \cdot N_3}{N_1 \cdot N_3 - N_1 \cdot N_2 - N_2 \cdot N_3} = 0$$

$$\mathbf{N}_1 - \frac{1}{\mathbf{A}} = 0 \quad \mathbf{N}_2 - \frac{1}{\mathbf{B}} = 0 \quad \mathbf{N}_3 - \frac{1}{\mathbf{C}} = 0$$

$$\mathbf{R}_1 - \frac{1}{\mathbf{B} - \mathbf{A} - \mathbf{C}} = 0 \quad \mathbf{R}_2 - (\mathbf{B} - \mathbf{A} - \mathbf{C}) = 0$$



	<b>ab = 1.00000</b>
	<b>N<sub>1</sub> = 2.66919</b>
<b>A = 0.37465</b>	<b>N<sub>2</sub> = 1.24111</b>
<b>B = 0.80573</b>	<b>N<sub>3</sub> = 5.47105</b>
<b>C = 0.18278</b>	<b>R<sub>1</sub> = 4.02733</b>

$$R_1 - \frac{N_1 \cdot N_2 \cdot N_3}{N_1 \cdot N_3 - N_1 \cdot N_2 - N_2 \cdot N_3} = 0.00000$$

$$R_1 - \frac{1}{B-A-C} = 0.00000$$

$$\frac{1}{B-A-C} - \frac{N_1 \cdot N_2 \cdot N_3}{N_1 \cdot N_3 - N_1 \cdot N_2 - N_2 \cdot N_3} = 0.00000$$

$$R_1 = 4.02733$$

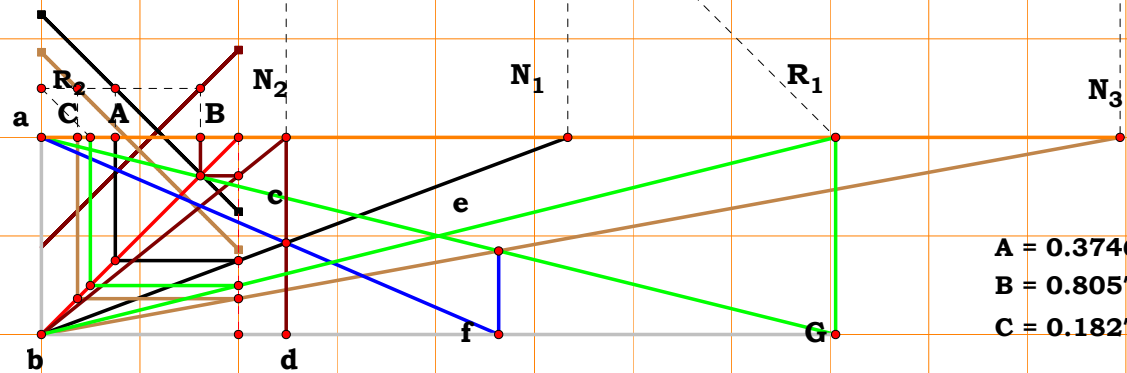
$$\frac{N_1 \cdot N_2 \cdot N_3}{N_1 \cdot N_3 - N_1 \cdot N_2 - N_2 \cdot N_3} = 4.02733$$

$$\frac{1}{B-A-C} = 4.02733$$

$$R_2 = 0.24830$$

**B-A-C = 0.24830**

$$R_2-(B-A-C) = 0.00000$$



$$\begin{aligned} A &= 0.37465 \\ B &= 0.80573 \\ C &= 0.18278 \end{aligned}$$

$$\begin{aligned} ab &= 1.00000 \\ N_1 &= 2.66919 \\ N_2 &= 1.24111 \\ N_3 &= 5.47105 \\ R_1 &= 4.02733 \end{aligned}$$

$$\begin{aligned} R_1 &= 4.02733 \\ \frac{N_1 \cdot N_2 \cdot N_3}{N_1 \cdot N_3 - N_1 \cdot N_2 - N_2 \cdot N_3} &= 4.02733 \\ \frac{1}{B-A-C} &= 4.02733 \end{aligned}$$

$$\begin{aligned} R_1 \cdot \frac{N_1 \cdot N_2 \cdot N_3}{N_1 \cdot N_3 - N_1 \cdot N_2 - N_2 \cdot N_3} &= 0.00000 \\ R_1 \cdot \frac{1}{B-A-C} &= 0.00000 \\ \frac{1}{B-A-C} - \frac{N_1 \cdot N_2 \cdot N_3}{N_1 \cdot N_3 - N_1 \cdot N_2 - N_2 \cdot N_3} &= 0.00000 \end{aligned}$$

$$\begin{aligned} R_2 &= 0.24830 \\ B-A-C &= 0.24830 \\ R_2 \cdot (B-A-C) &= 0.00000 \end{aligned}$$





Given.

Unit.  $ab := 1$

$N_1 := 4.76800 \quad N_2 := 1.19206$

$N_3 := 3.24347 \quad N_4 := 1.42325$

$$A := \frac{1}{N_1} \quad B := \frac{1}{N_2} \quad C := \frac{1}{N_3} \quad D := \frac{1}{N_4}$$

Descriptions.

$$cd := \frac{N_2}{N_1} \quad bf := \frac{N_2}{1 - cd}$$

$$ef := \frac{bf}{N_3} \quad GN_4 := 1 - ef$$

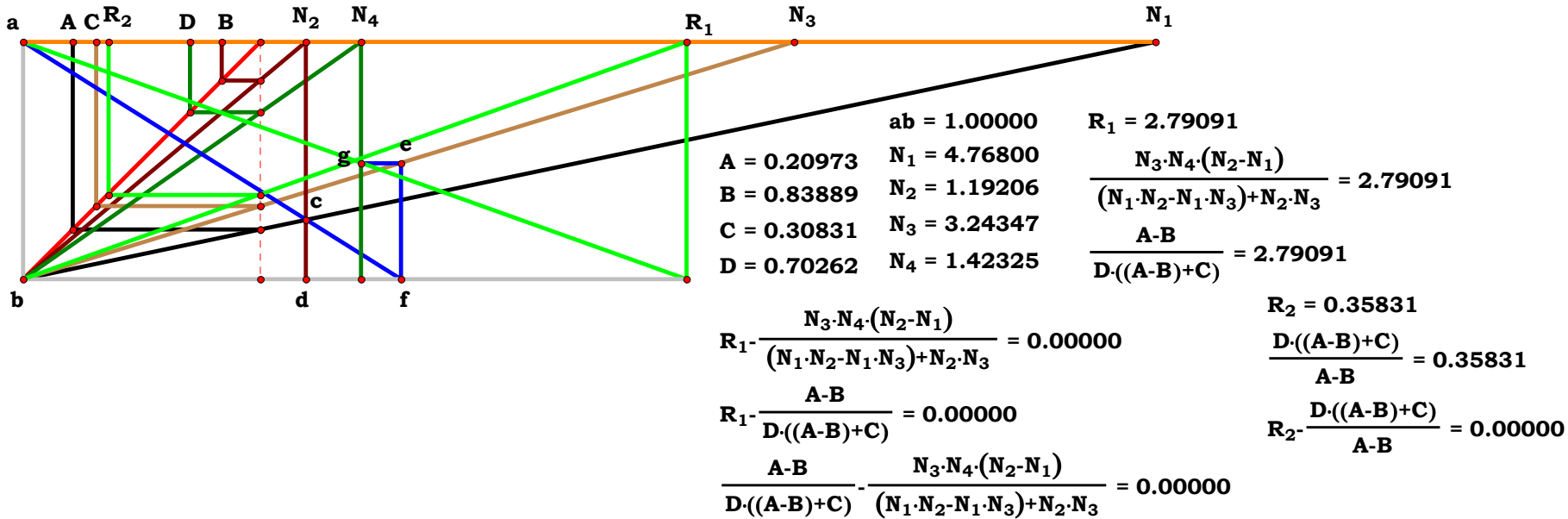
$$R_1 := \frac{N_4}{GN_4} \quad R_1 = 2.790922 \quad R_2 := \frac{1}{R_1}$$

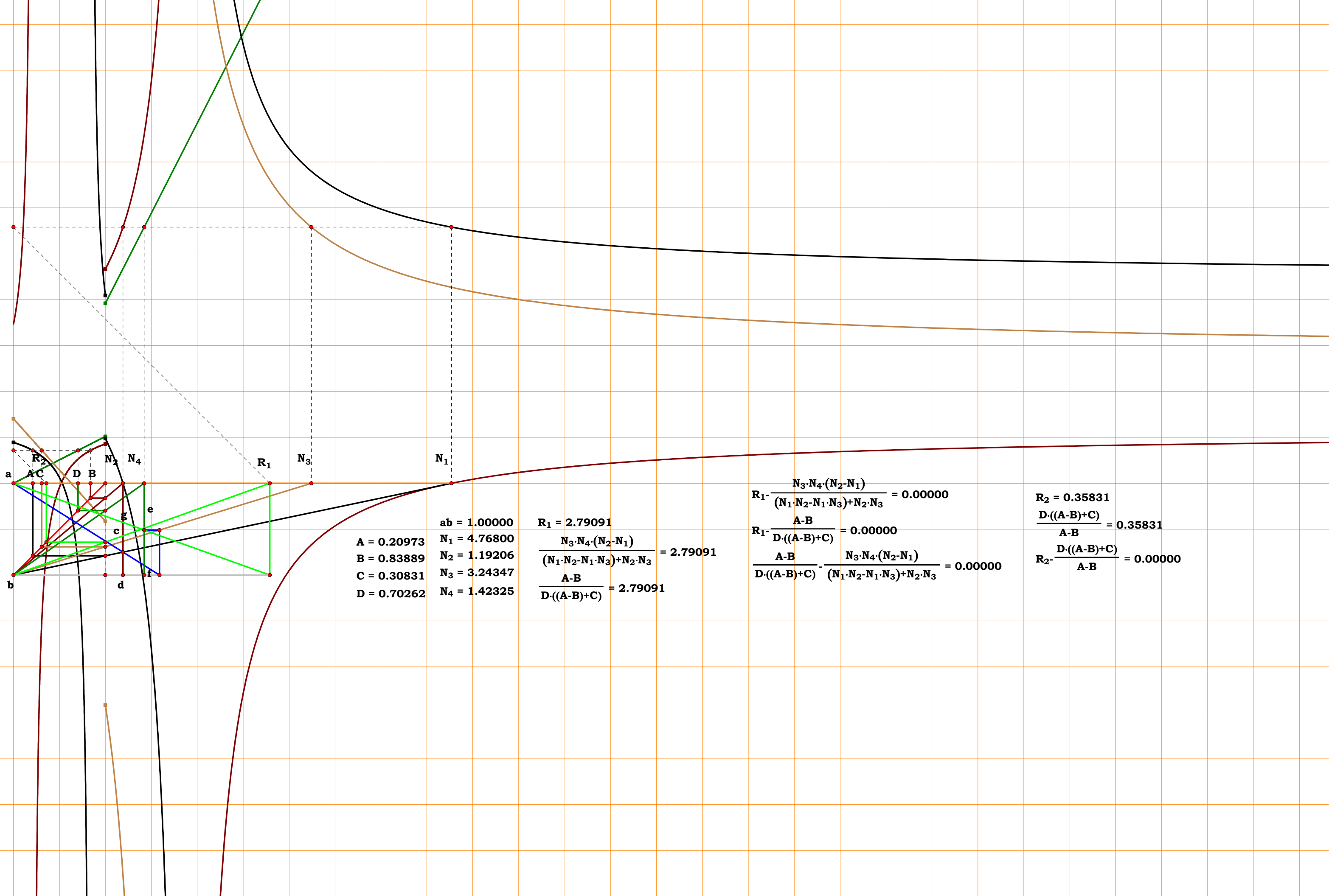
Definitions.

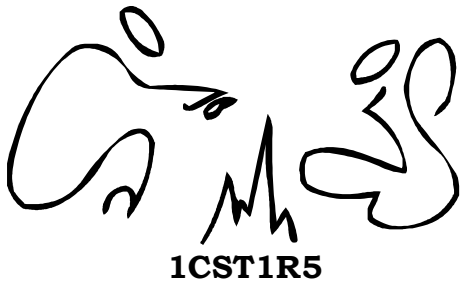
$$R_1 - \frac{N_3 \cdot N_4 \cdot (N_2 - N_1)}{N_1 \cdot N_2 - N_1 \cdot N_3 + N_2 \cdot N_3} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0 \quad N_4 - \frac{1}{D} = 0$$

$$R_1 - \frac{(A - B)}{D \cdot (A - B + C)} = 0 \quad R_1 - \frac{A - B}{D \cdot (A - B + C)} = 0$$







Given.

Unit.  $ab := 1$      $N_1 := 2.62654$

$N_2 := 1.25947$      $N_3 := 5.81976$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$

Descriptions.

$eN_2 := 1 - \frac{N_2}{N_1}$      $bf := \frac{N_2}{eN_2}$

$df := \frac{bf}{N_3}$      $cd := bf \cdot df$

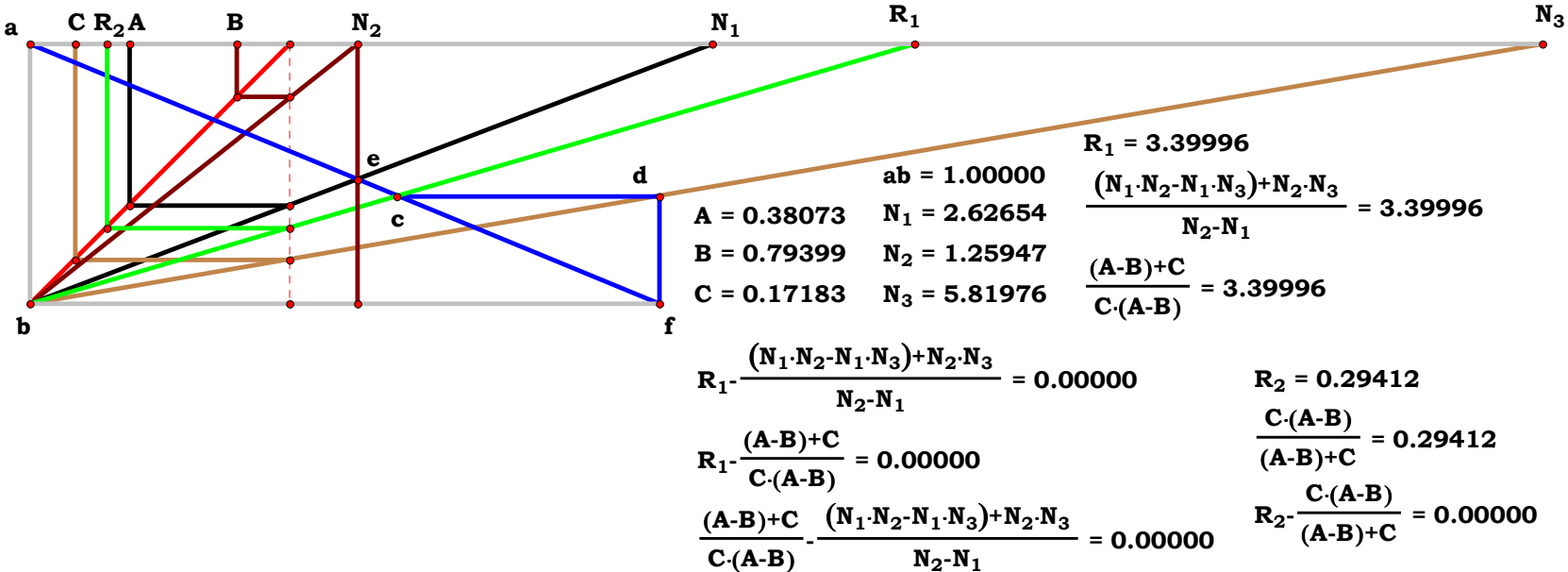
$R_1 := \frac{bf - cd}{df}$      $R_1 = 3.399951$      $R_2 := \frac{1}{R_1}$

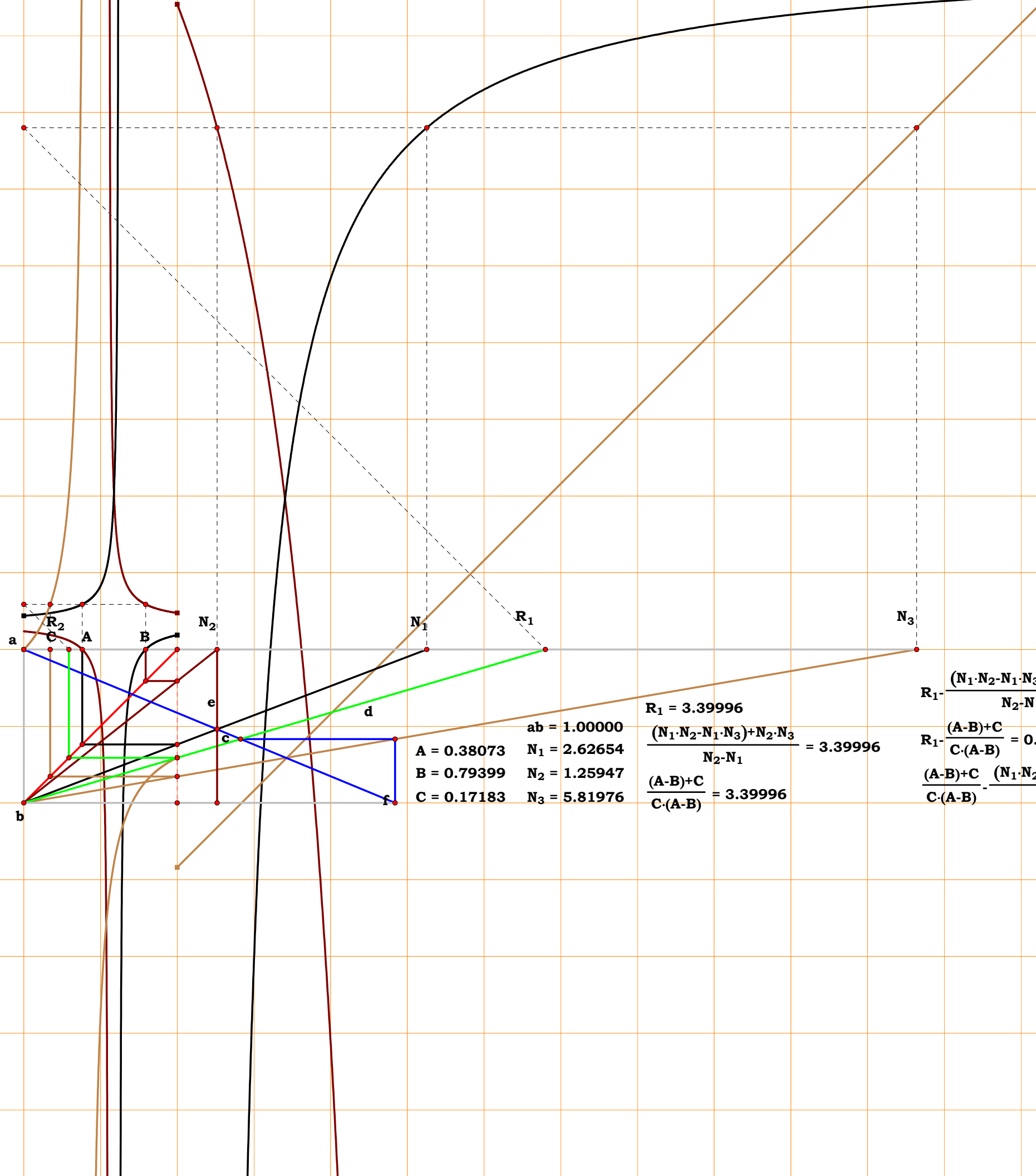
Definitions.

$R_1 - \frac{N_1 \cdot N_2 - N_1 \cdot N_3 + N_2 \cdot N_3}{N_2 - N_1} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$      $N_3 - \frac{1}{C} = 0$

$R_1 - \frac{A - B + C}{C \cdot (A - B)} = 0$      $R_2 - \frac{C \cdot (A - B)}{A - B + C} = 0$





$ab = 1.00000$   
 $A = 0.38073$   
 $B = 0.79399$   
 $C = 0.17183$

$N_1 = 2.62654$   
 $N_2 = 1.25947$   
 $N_3 = 5.81976$

$$R_1 = 3.39996$$

$$\frac{(N_1 \cdot N_2 - N_1 \cdot N_3) + N_2 \cdot N_3}{N_2 - N_1} = 3.39996$$

$$\frac{(A-B)+C}{C \cdot (A-B)} = 3.39996$$

$$R_1 - \frac{(N_1 \cdot N_2 - N_1 \cdot N_3) + N_2 \cdot N_3}{N_2 - N_1} = 0.00000$$

$$R_1 - \frac{(A-B)+C}{C \cdot (A-B)} = 0.00000$$

$$\frac{(A-B)+C}{C \cdot (A-B)} - \frac{(N_1 \cdot N_2 - N_1 \cdot N_3) + N_2 \cdot N_3}{N_2 - N_1} = 0.00000$$

$$R_2 = 0.29412$$

$$\frac{C \cdot (A-B)}{(A-B)+C} = 0.29412$$

$$R_2 - \frac{C \cdot (A-B)}{(A-B)+C} = 0.00000$$

**1CST1R7**

Unit.  $\mathbf{ab} := 1$       $\mathbf{N}_1 := 2.09505$ 
$$\mathbf{N}_2 := 1.45041 \quad \mathbf{N}_3 := 1.74995$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3}$$

$$\mathbf{cN}_2 := 1 - \frac{N_2}{N_1} \quad \mathbf{R}_1 := \frac{N_3}{1 - \mathbf{cN}_2}$$

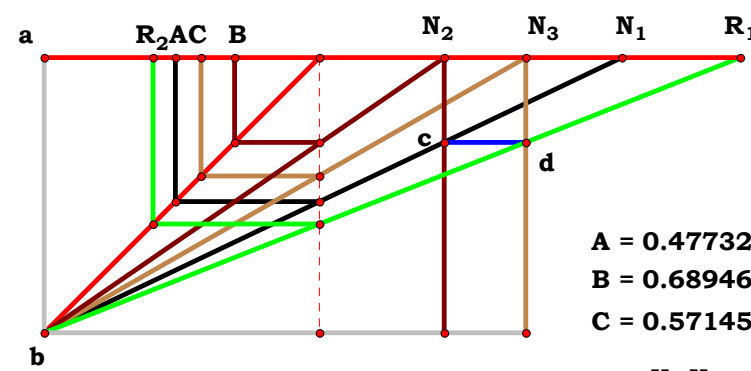
$$\mathbf{R}_1 = 2.527722 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$

## Definitions.

$$R_1 - \frac{N_1 \cdot N_3}{N_2} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$R_1 - \frac{B}{A \cdot C} = 0 \quad R_2 - \frac{A \cdot C}{B} = 0$$



**A = 0.47732**  
**B = 0.68946**  
**C = 0.57145**

**ab = 1.00000**  
**N<sub>1</sub> = 2.09505**  
**N<sub>2</sub> = 1.45041**  
**N<sub>3</sub> = 1.74995**

$$\mathbf{R}_1 = 2.52772$$

$$\frac{N_1 \cdot N_3}{N_2} = 2.52772$$

$$\frac{B}{A \cdot C} = 2.52772$$

$$R_1 - \frac{N_1 \cdot N_3}{N_2} = 0.00000$$

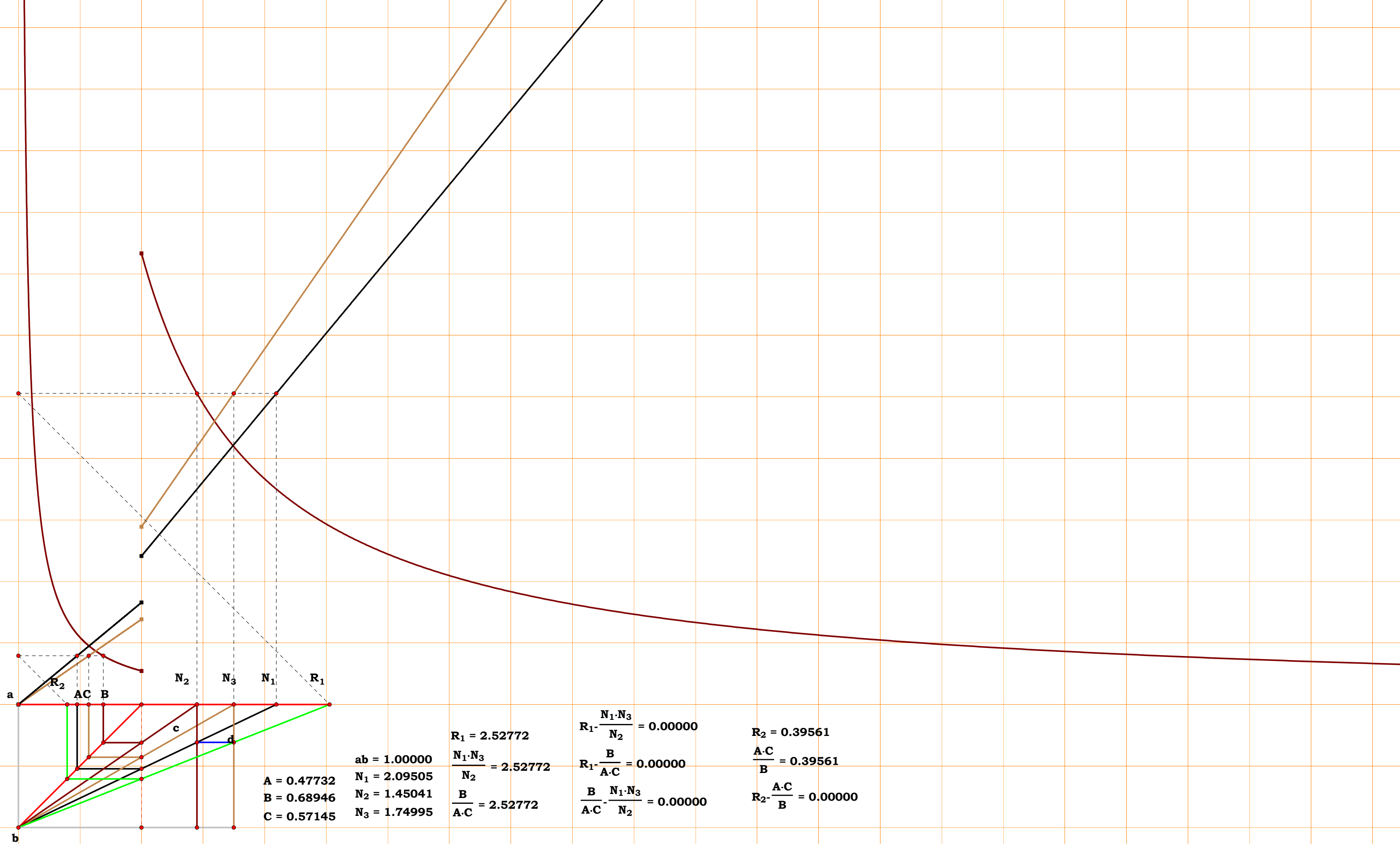
$$R_2 = 0.39561$$

$$R_1 - \frac{B}{A \cdot C} = 0.00000$$

$$\frac{A \cdot C}{B} = 0.39561$$

$$\frac{B}{A \cdot C} - \frac{N_1 \cdot N_3}{N_2} = 0.00000$$

$$R_2 - \frac{A \cdot C}{B} = 0.00000$$



$$\begin{aligned} A &= 0.47732 \\ B &= 0.68946 \\ C &= 0.57145 \end{aligned}$$

$$\begin{aligned} ab &= 1.00000 \\ N_1 &= 2.09505 \\ N_2 &= 1.45041 \\ N_3 &= 1.74995 \end{aligned}$$

$$\begin{aligned} R_1 &= 2.52772 \\ \frac{N_1 \cdot N_3}{N_2} &= 2.52772 \\ \frac{B}{A \cdot C} &= 2.52772 \end{aligned}$$

$$\begin{aligned} R_1 - \frac{N_1 \cdot N_3}{N_2} &= 0.00000 \\ R_1 - \frac{B}{A \cdot C} &= 0.00000 \\ \frac{B}{A \cdot C} - \frac{N_1 \cdot N_3}{N_2} &= 0.00000 \end{aligned}$$

$$\begin{aligned} R_2 &= 0.39561 \\ \frac{A \cdot C}{B} &= 0.39561 \\ R_2 - \frac{A \cdot C}{B} &= 0.00000 \end{aligned}$$



**Given.**

**Unit.**     $ab := 1$        $N_1 := 2.32078$

$N_2 := 1.31188$     $N_3 := 1.55825$

$$A := \frac{1}{N_1} \quad B := \frac{1}{N_2} \quad C := \frac{1}{N_3}$$

**Descriptions.**

$$cN_2 := 1 - \frac{N_2}{N_1} \qquad ae := \frac{N_3}{1 - cN_2}$$

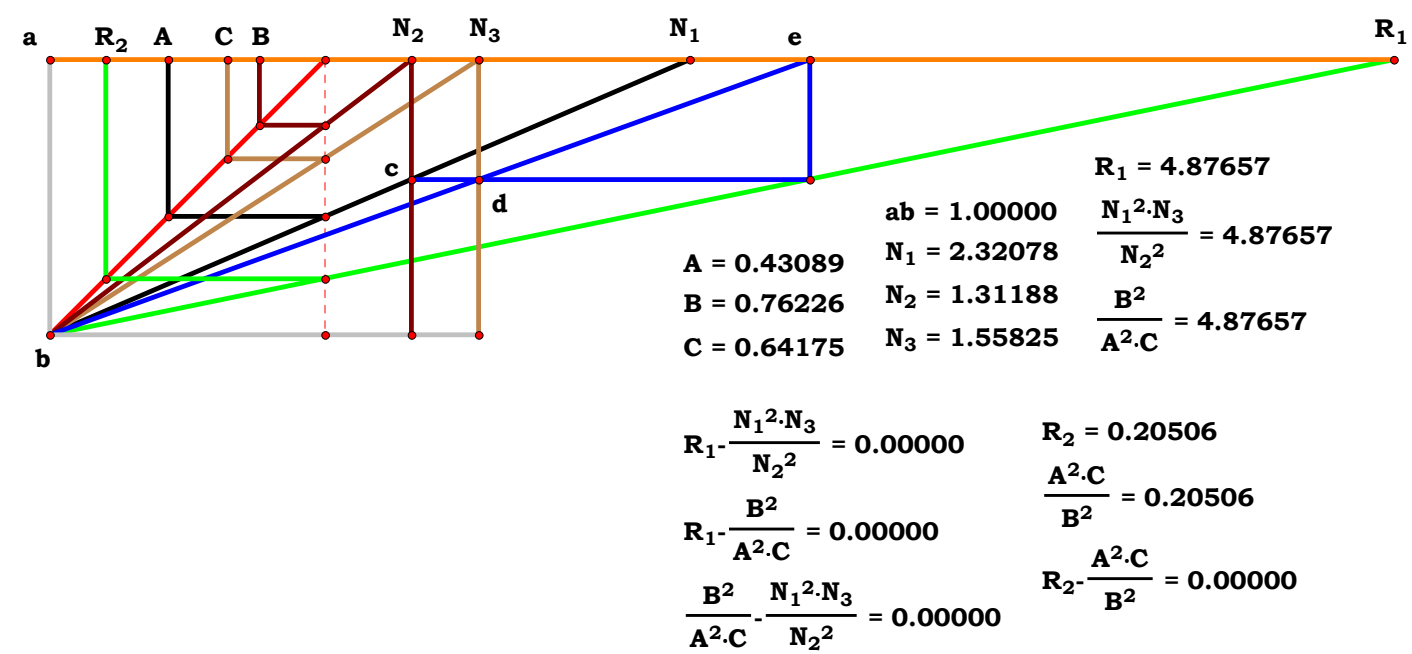
$$R_1 := \frac{ae}{1 - cN_2} \qquad R_1 = 4.876597 \qquad R_2 := \frac{1}{R_1}$$

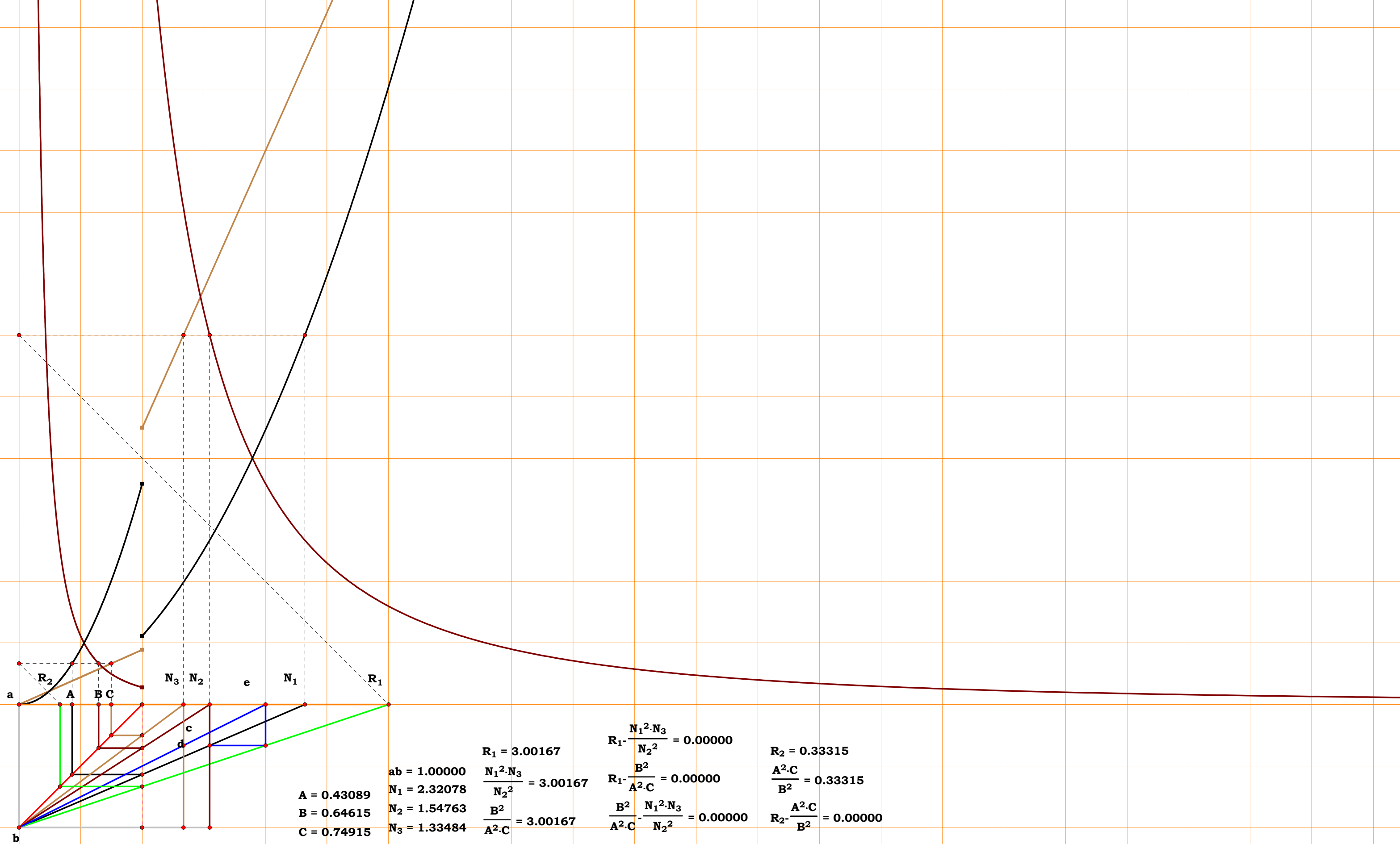
**Definitions.**

$$R_1 - \frac{N_1^2 \cdot N_3}{N_2^2} = 0$$

$$N_1 - \frac{1}{A} = 0 \qquad N_2 - \frac{1}{B} = 0 \qquad N_3 - \frac{1}{C} = 0$$

$$R_1 - \frac{B^2}{A^2 \cdot C} = 0 \qquad R_2 - \frac{A^2 \cdot C}{B^2} = 0$$







**1CST1R9**

**Unit.  $ab := 1$      $N_1 := 4.91650$**

$$\mathbf{N}_2 := 1.52772 \quad \mathbf{N}_3 := 2.02884$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3}$$

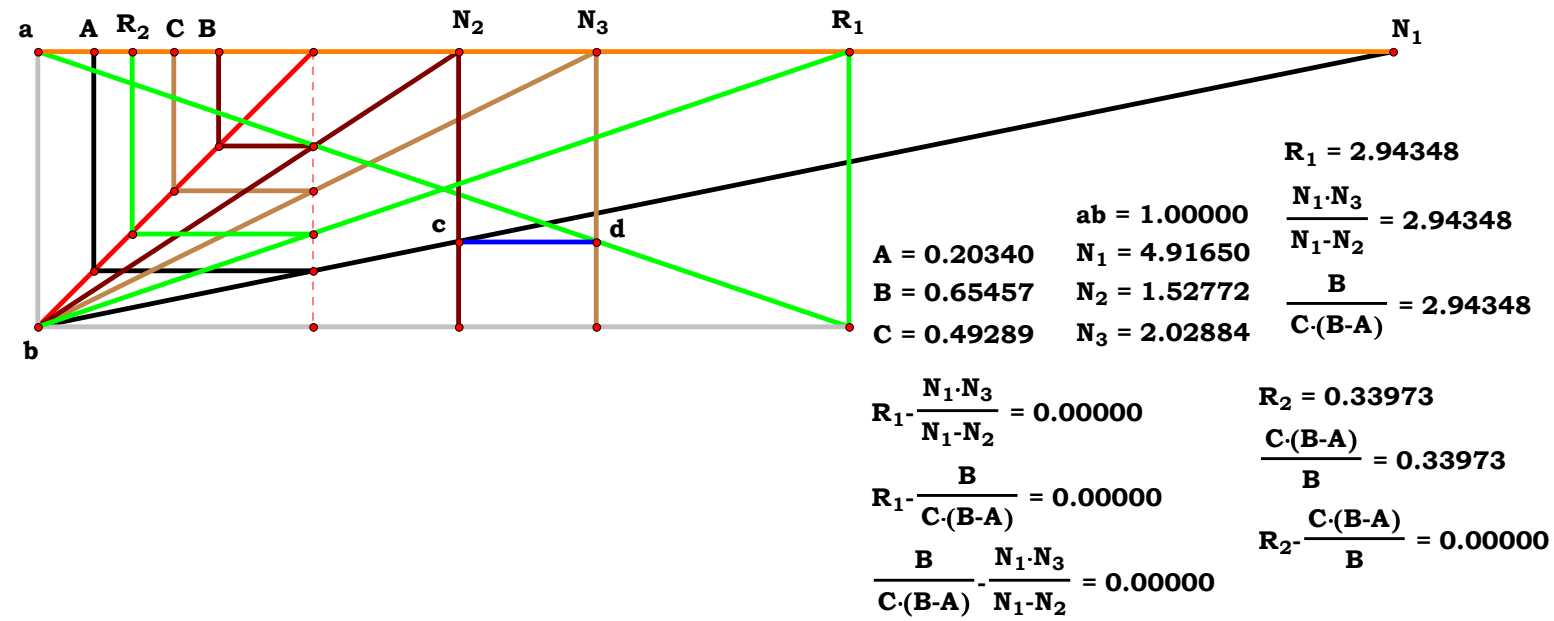
$$\mathbf{cN}_2 := 1 - \frac{\mathbf{N}_2}{\mathbf{N}_1} \quad \mathbf{R}_1 := \frac{\mathbf{N}_3}{\mathbf{cN}_2}$$

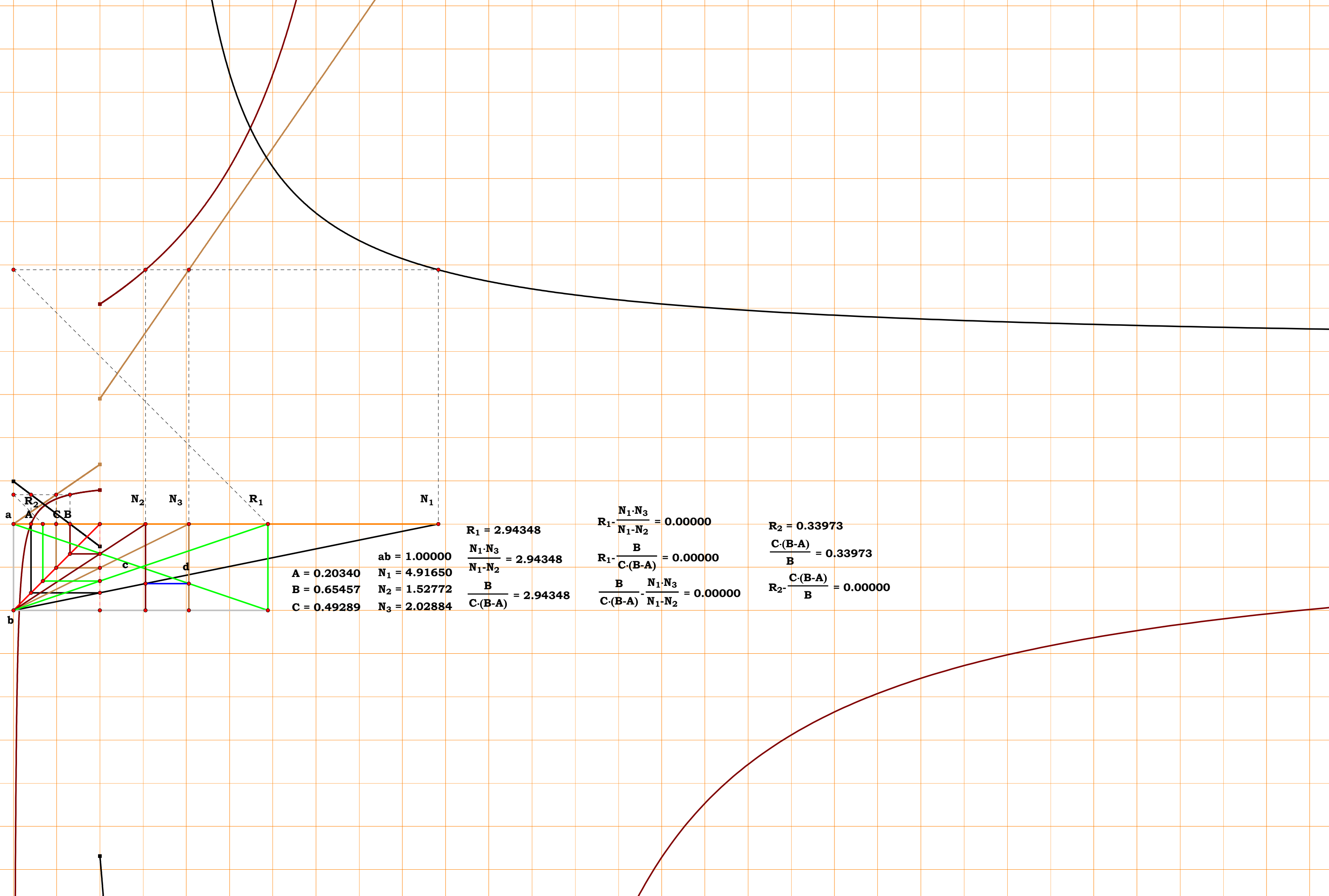
$$\mathbf{R}_1 = 2.943476 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$

$$R_1 - \frac{N_1 \cdot N_3}{N_1 - N_2} = 0$$

$$\mathbf{N}_1 - \frac{1}{\mathbf{A}} = 0 \quad \mathbf{N}_2 - \frac{1}{\mathbf{B}} = 0 \quad \mathbf{N}_3 - \frac{1}{\mathbf{C}} = 0$$

$$\mathbf{R}_1 - \frac{\mathbf{B}}{\mathbf{C} \cdot (\mathbf{B} - \mathbf{A})} = 0 \quad \mathbf{R}_2 - \frac{\mathbf{C} \cdot (\mathbf{B} - \mathbf{A})}{\mathbf{B}} = 0$$







1CST1R10

Given.

Unit.  $ab := 1$      $N_1 := 3.19161$

$N_2 := 1.68348$      $N_3 := 1.24184$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$

Descriptions.

$cN_2 := 1 - \frac{N_2}{N_1}$      $ad := \frac{N_3}{1 - cN_2}$

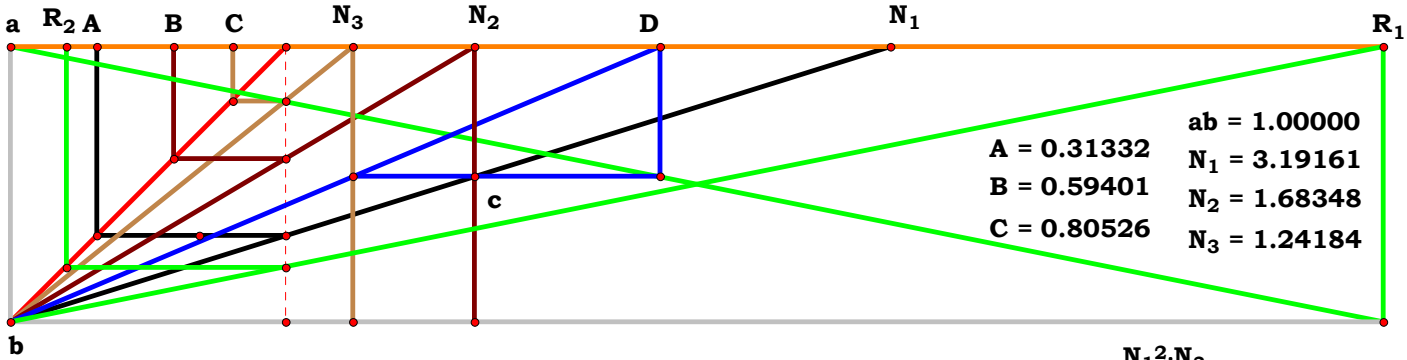
$R_1 := \frac{ad}{cN_2}$      $R_1 = 4.982399$      $R_2 := \frac{1}{R_1}$

Definitions.

$R_1 - \frac{N_1^2 \cdot N_3}{N_2 \cdot (N_1 - N_2)} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$      $N_3 - \frac{1}{C} = 0$

$R_1 - \frac{B^2}{C \cdot (A \cdot B - A^2)} = 0$      $R_2 - \frac{C \cdot (A \cdot B - A^2)}{B^2} = 0$



$ab = 1.00000$   
 $A = 0.31332$      $N_1 = 3.19161$   
 $B = 0.59401$      $N_2 = 1.68348$   
 $C = 0.80526$      $N_3 = 1.24184$

$R_1 = 4.98241$

$\frac{N_1^2 \cdot N_3}{N_2 \cdot (N_1 - N_2)} = 4.98241$

$\frac{B^2}{C \cdot (A \cdot B - A^2)} = 4.98241$

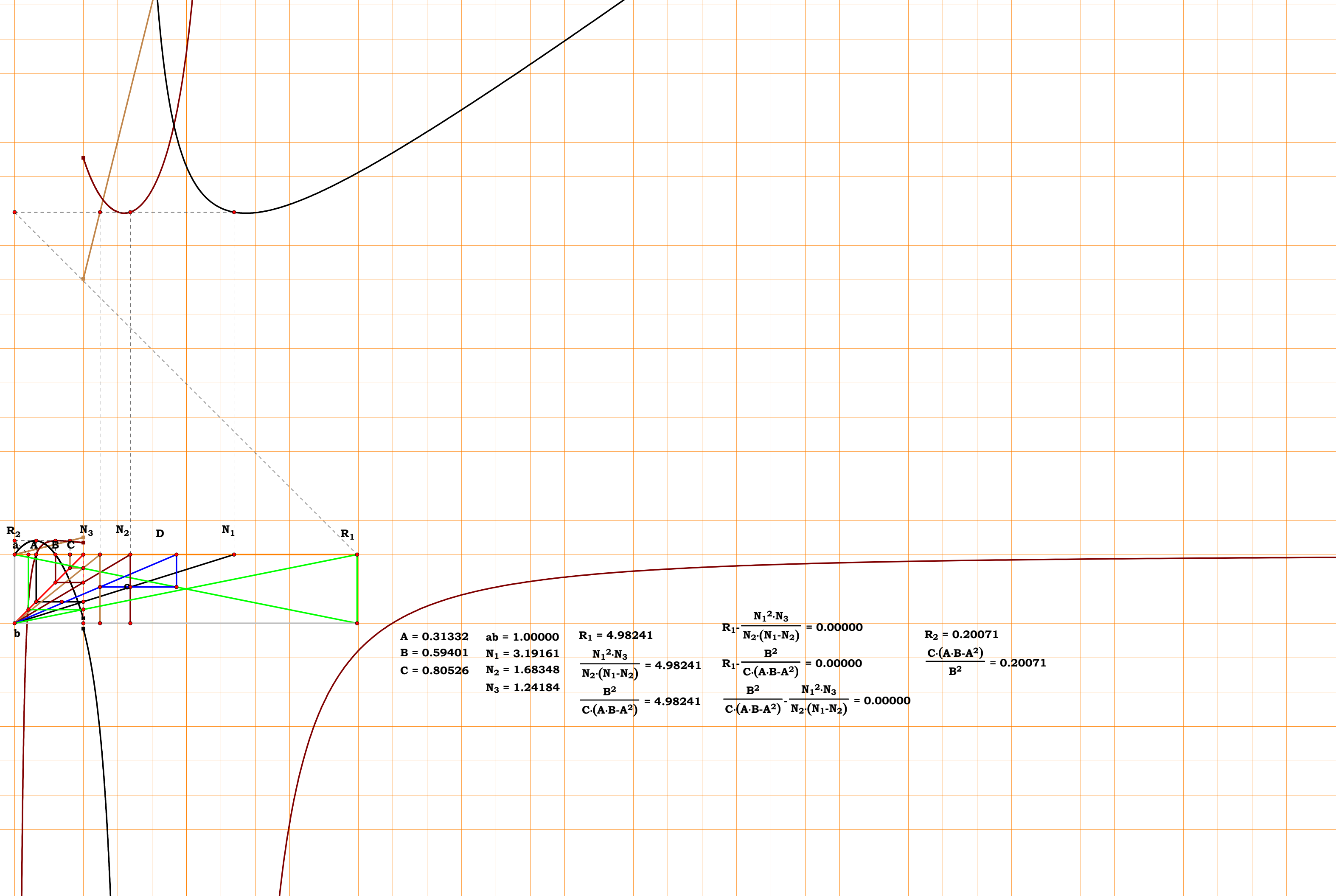
$R_1 - \frac{N_1^2 \cdot N_3}{N_2 \cdot (N_1 - N_2)} = 0.00000$

$R_1 - \frac{B^2}{C \cdot (A \cdot B - A^2)} = 0.00000$

$\frac{B^2}{C \cdot (A \cdot B - A^2)} - \frac{N_1^2 \cdot N_3}{N_2 \cdot (N_1 - N_2)} = 0.00000$

$R_2 = 0.20071$

$\frac{C \cdot (A \cdot B - A^2)}{B^2} = 0.20071$





**Given.**

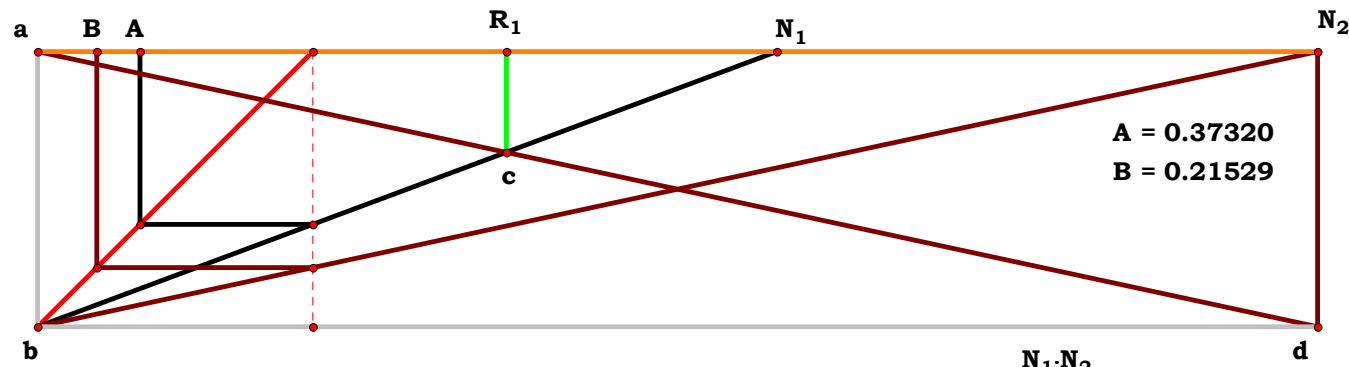
**Unit.**  $\mathbf{ab} := 1$

$$\mathbf{N}_1 := 2.67952 \quad \mathbf{N}_2 := 4.64497$$
$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2}$$

### Descriptions.

$$\mathbf{bd} := \mathbf{N}_2 \quad \mathbf{R}_1 := \frac{\mathbf{bd} \cdot \mathbf{N}_1}{\mathbf{bd} + \mathbf{N}_1}$$
$$\mathbf{R}_1 = 1.699271$$

### Definitions.

$$R_1 - \frac{N_1 \cdot N_2}{N_1 + N_2} = 0$$
$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0$$
$$\mathbf{R}_1 - \frac{1}{\mathbf{A} + \mathbf{B}} = \mathbf{0}$$


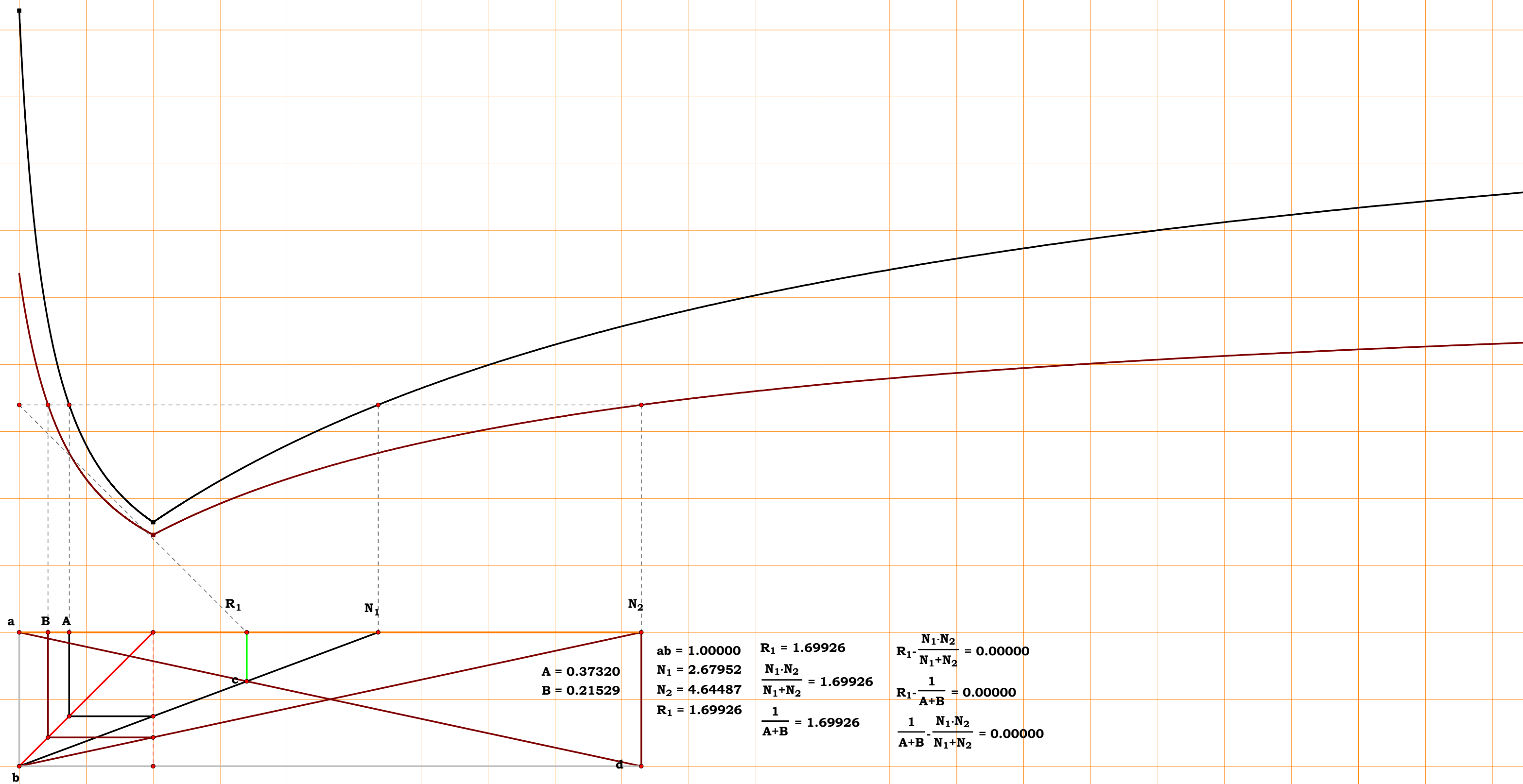
$$R_1 \cdot \frac{N_1 \cdot N_2}{N_1 + N_2} = 0.00000$$

$$R_1 - \frac{1}{A+B} = 0.00000$$

$$\frac{1}{A+B} - \frac{N_1 \cdot N_2}{N_1 + N_2} = 0.00000$$

**ab = 1.00000**  
**N<sub>1</sub> = 2.67952**  
**N<sub>2</sub> = 4.64487**  
**R<sub>1</sub> = 1.69926**

$$\begin{aligned} R_1 &= 1.69926 \\ \frac{N_1 \cdot N_2}{N_1 + N_2} &= 1.69926 \\ \frac{1}{A+B} &= 1.69926 \end{aligned}$$





**1CST2R1**

**Given.**

**Unit.**   **ab** := 1      **N<sub>1</sub>** := 2.70683

$$\mathbf{N}_2 := 3.68191 \quad \mathbf{N}_3 := 5.30802$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3}$$

### Descriptions.

$$\mathbf{ad} := \frac{N_1 \cdot N_2}{N_1 + N_2} \quad \mathbf{R}_1 := \frac{\mathbf{ad} \cdot N_3}{\mathbf{ad} + N_3}$$

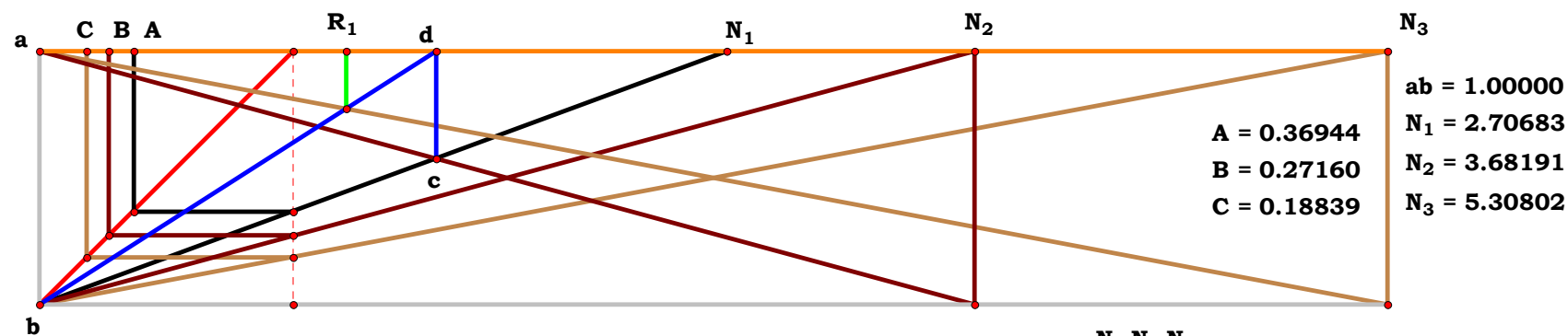
$$\mathbf{R}_1 = 1.20565$$

### Definitions.

$$R_1 - \frac{N_1 \cdot N_2 \cdot N_3}{N_1 \cdot N_2 + N_1 \cdot N_3 + N_2 \cdot N_3} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$\mathbf{R}_1 - \frac{1}{\mathbf{A} + \mathbf{B} + \mathbf{C}} = 0$$



$$R_1 - \frac{N_1 \cdot N_2 \cdot N_3}{N_1 \cdot N_2 + N_1 \cdot N_3 + N_2 \cdot N_3} = 0.00000$$

$$R_1 - \frac{1}{A+B+C} = 0.00000$$

$$\frac{1}{A+B+C} - \frac{N_1 \cdot N_2 \cdot N_3}{N_1 \cdot N_2 + N_1 \cdot N_3 + N_2 \cdot N_3} = 0.00000$$

$$R_1 = 1.20565$$

$$\frac{N_1 \cdot N_2 \cdot N_3}{N_1 \cdot N_2 + N_1 \cdot N_3 + N_2 \cdot N_3} = 1.20565$$

$$\frac{1}{A+B+C} = 1.20565$$

**ab = 1.00000**

$$N_1 = 2.70683$$

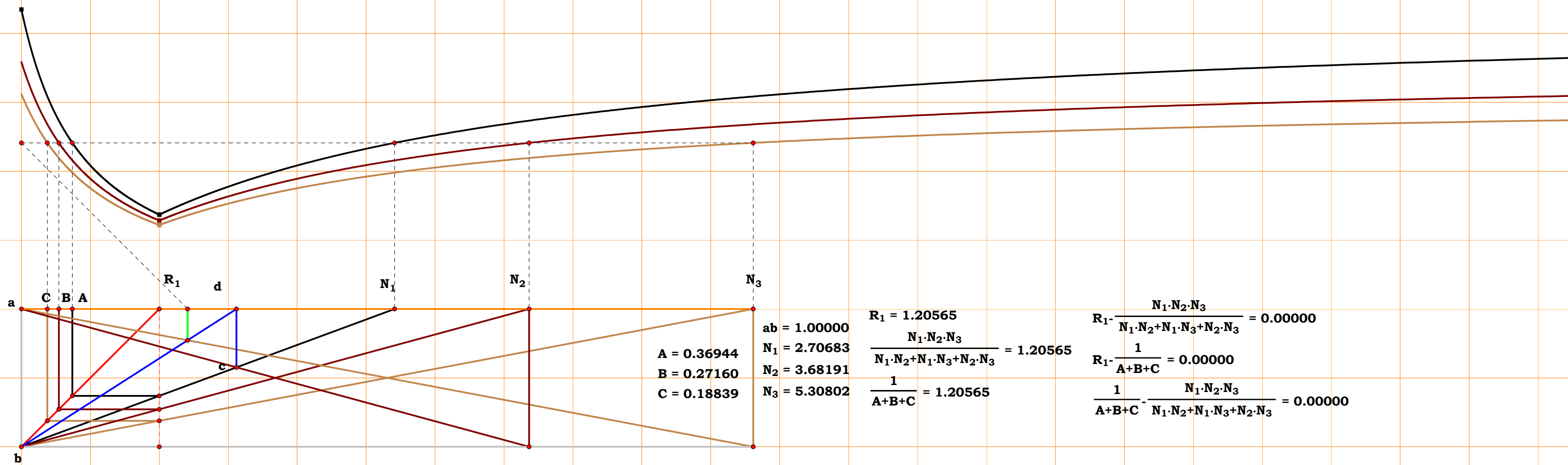
$$N_2 = 3.68191$$

$$N_3 = 5.30802$$

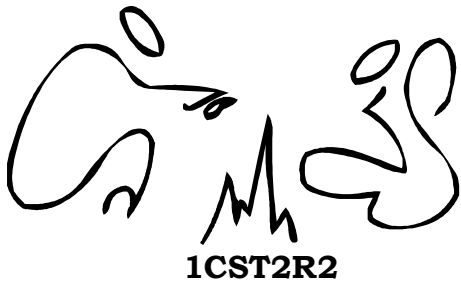
**A = 0.36944**

**B = 0.27160**

**C = 0.18839**







Given.

Unit.  $ab := 1$      $N_1 := 3.51337$   
 $N_2 := 2.49592$      $N_3 := 4.77660$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$

Descriptions.

$ae := \frac{N_1 \cdot N_2}{N_1 + N_2}$      $ac := \frac{ae \cdot N_3}{ae + N_3}$

$cd := \frac{ac}{N_3}$      $R_1 := \frac{ae}{1 - cd}$

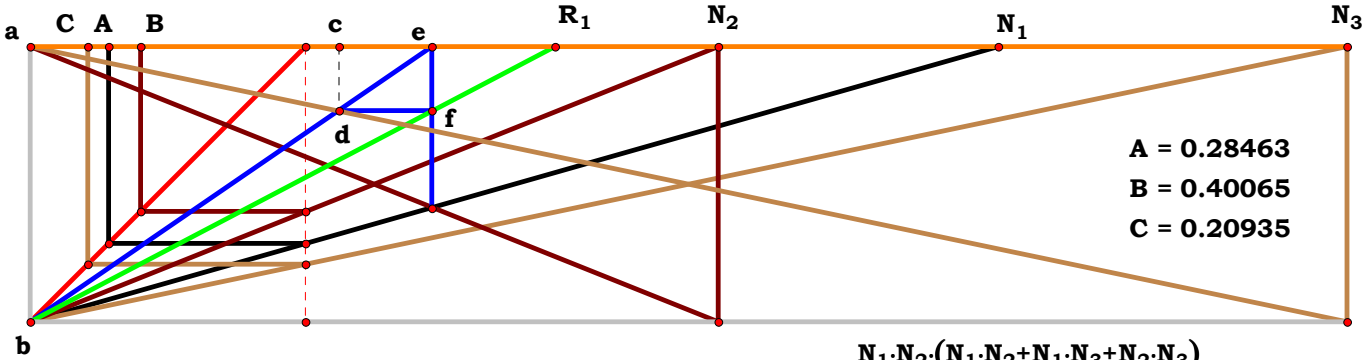
$R_1 = 1.90506$

Definitions.

$R_1 - \frac{N_1 \cdot N_2 \cdot (N_1 \cdot N_2 + N_1 \cdot N_3 + N_2 \cdot N_3)}{N_3 \cdot (N_1 + N_2)^2} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$      $N_3 - \frac{1}{C} = 0$

$R_1 - \frac{(A + B + C)}{(A + B)^2} = 0$



$A = 0.28463$   
 $B = 0.40065$   
 $C = 0.20935$

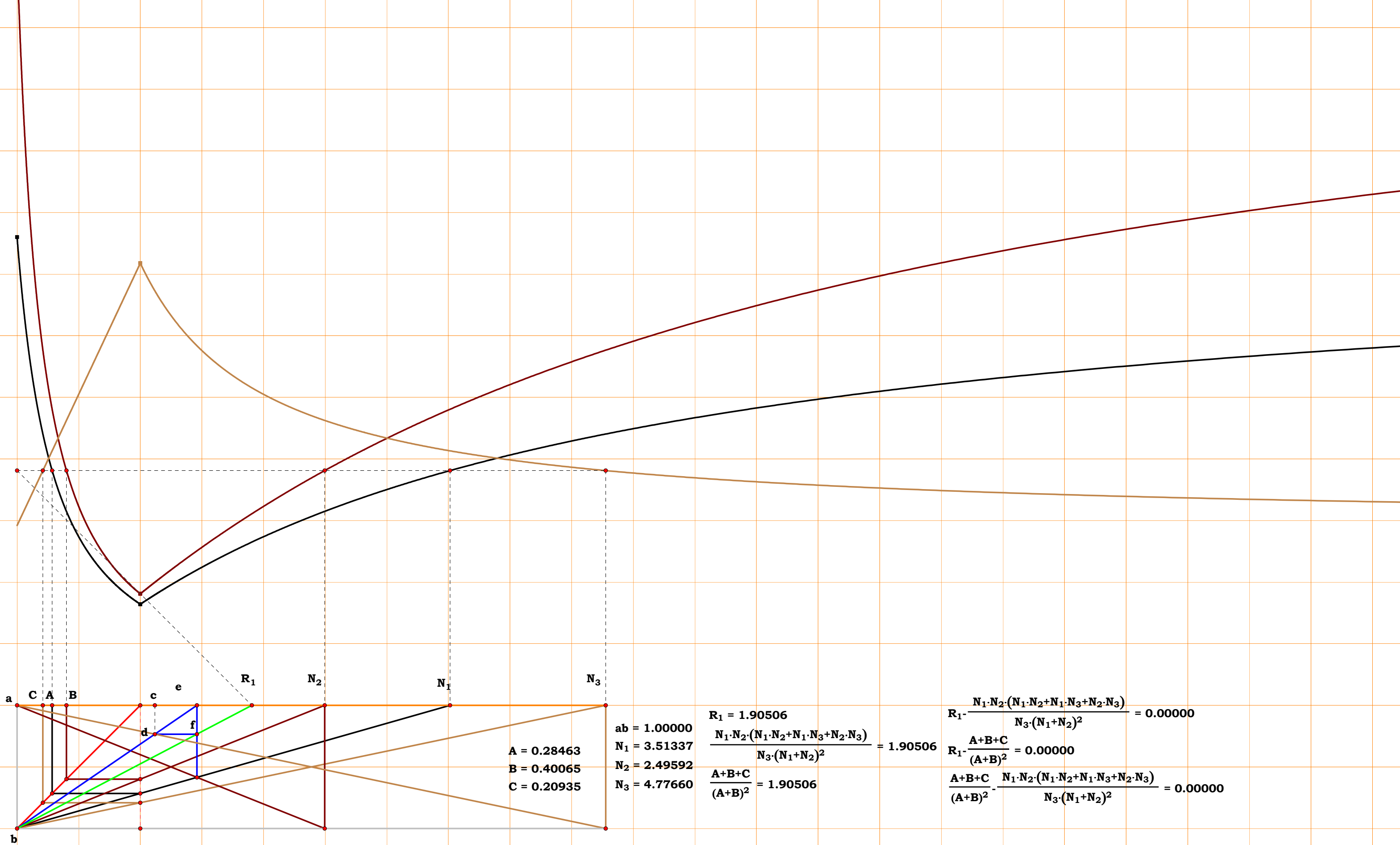
$ab = 1.00000$   
 $N_1 = 3.51337$   
 $N_2 = 2.49592$   
 $N_3 = 4.77660$

$R_1 = 1.90506$   
 $\frac{N_1 \cdot N_2 \cdot (N_1 \cdot N_2 + N_1 \cdot N_3 + N_2 \cdot N_3)}{N_3 \cdot (N_1 + N_2)^2} = 1.90506$   
 $\frac{A + B + C}{(A + B)^2} = 1.90506$

$R_1 - \frac{N_1 \cdot N_2 \cdot (N_1 \cdot N_2 + N_1 \cdot N_3 + N_2 \cdot N_3)}{N_3 \cdot (N_1 + N_2)^2} = 0.00000$

$R_1 - \frac{A + B + C}{(A + B)^2} = 0.00000$

$\frac{A + B + C}{(A + B)^2} - \frac{N_1 \cdot N_2 \cdot (N_1 \cdot N_2 + N_1 \cdot N_3 + N_2 \cdot N_3)}{N_3 \cdot (N_1 + N_2)^2} = 0.00000$





Given.

Unit.    $ab := 1$       $N_1 := 2.79633$

$N_2 := 2.30481$      $N_3 := 3.47782$      $N_4 := 1.87224$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$      $D := \frac{1}{N_4}$

Descriptions.

$ag := \frac{N_1 \cdot N_2}{N_1 + N_2}$       $ac := \frac{ag \cdot N_3}{ag + N_3}$

$cd := \frac{ac}{N_3}$       $R_1 := \frac{N_4}{1 - cd}$

$R_1 = 2.552399$

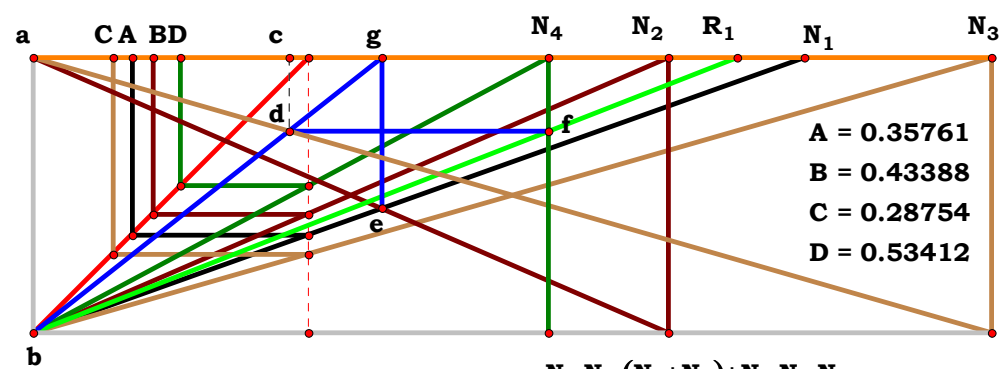
Definitions.

$$R_1 - \frac{N_1 \cdot N_4 \cdot (N_2 + N_3) + N_2 \cdot N_3 \cdot N_4}{N_3 \cdot (N_1 + N_2)} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0$$

$$N_3 - \frac{1}{C} = 0 \quad N_4 - \frac{1}{D} = 0$$

$$R_1 - \frac{(A + B + C)}{D \cdot (A + B)} = 0$$



$$R_1 - \frac{N_1 \cdot N_4 \cdot (N_2 + N_3) + N_2 \cdot N_3 \cdot N_4}{N_3 \cdot (N_1 + N_2)} = 0.00000$$

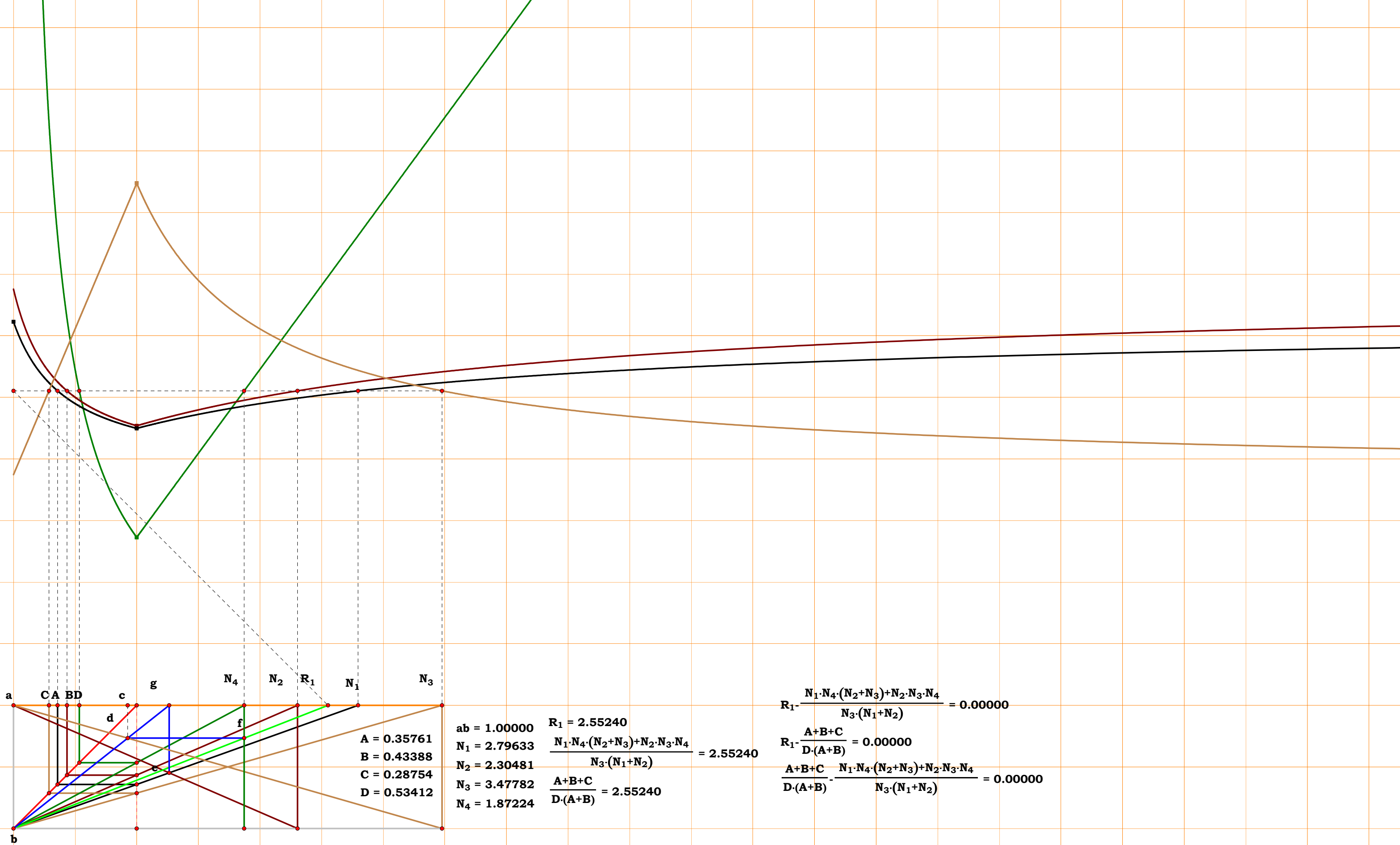
$$R_1 - \frac{A + B + C}{D \cdot (A + B)} = 0.00000$$

$$\frac{A + B + C}{D \cdot (A + B)} - \frac{N_1 \cdot N_4 \cdot (N_2 + N_3) + N_2 \cdot N_3 \cdot N_4}{N_3 \cdot (N_1 + N_2)} = 0.00000$$

$A = 0.35761$   
 $B = 0.43388$   
 $C = 0.28754$   
 $D = 0.53412$

$ab = 1.00000$   
 $N_1 = 2.79633$   
 $N_2 = 2.30481$   
 $N_3 = 3.47782$   
 $N_4 = 1.87224$

$R_1 = 2.55240$   
 $\frac{N_1 \cdot N_4 \cdot (N_2 + N_3) + N_2 \cdot N_3 \cdot N_4}{N_3 \cdot (N_1 + N_2)} = 2.55240$   
 $\frac{A + B + C}{D \cdot (A + B)} = 2.55240$





Given.

Unit.     $ab := 1$      $N_1 := 3.69900$

$N_2 := 2.52135$      $N_3 := 2.03023$

$$A := \frac{1}{N_1} \quad B := \frac{1}{N_2} \quad C := \frac{1}{N_3}$$

Descriptions.

$$ad := \frac{N_1 \cdot N_2}{N_1 + N_2} \qquad ac := \frac{ad \cdot N_3}{ad + N_3}$$

$$ce := \frac{ac}{N_3} \qquad R_1 := \frac{ad}{ce}$$

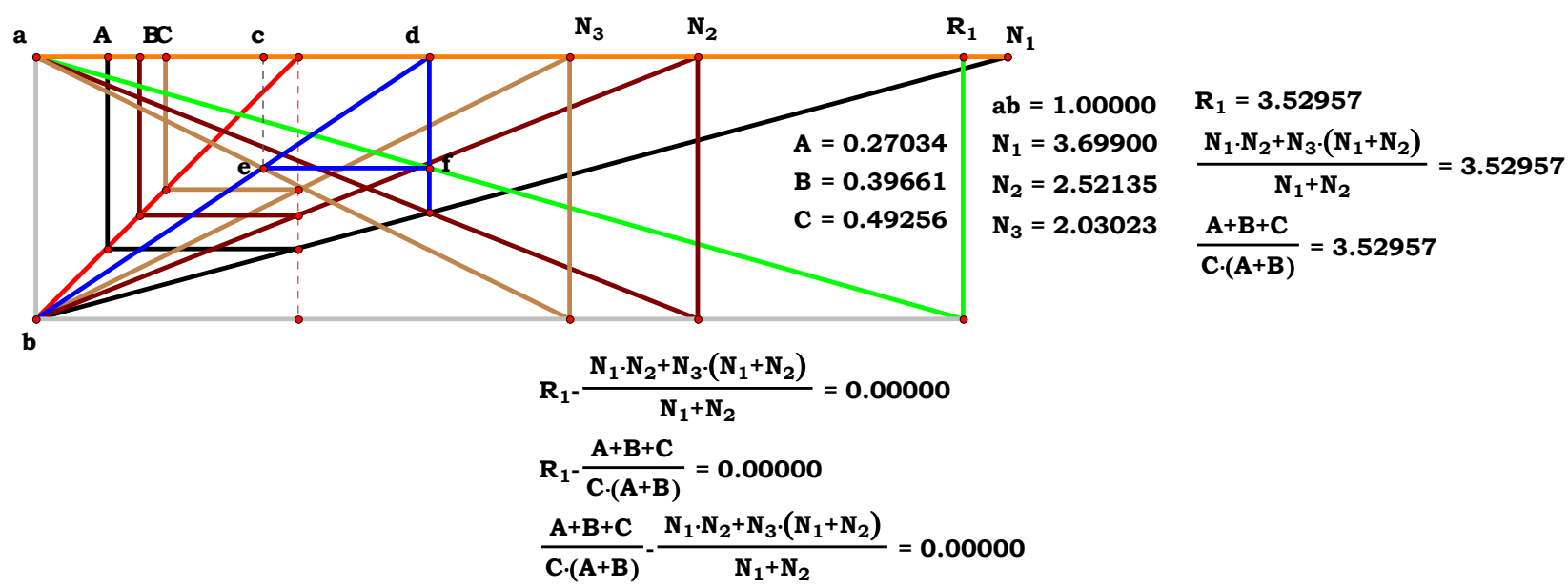
$$R_1 = 3.529579$$

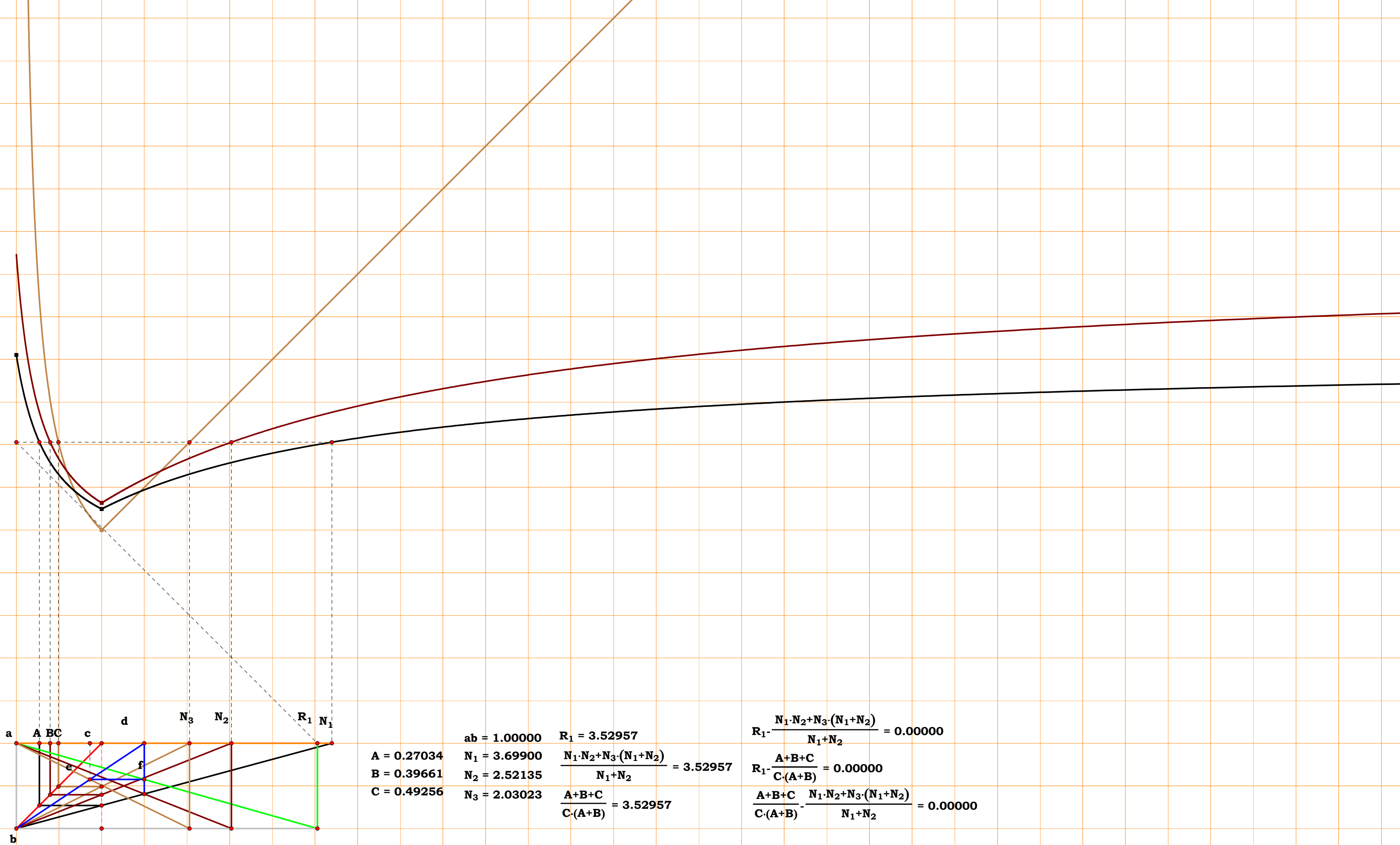
Definitions.

$$R_1 - \frac{N_1 \cdot N_2 + N_3 \cdot (N_1 + N_2)}{N_1 + N_2} = 0$$

$$N_1 - \frac{1}{A} = 0 \qquad N_2 - \frac{1}{B} = 0 \qquad N_3 - \frac{1}{C} = 0$$

$$R_1 - \frac{(A + B + C)}{C \cdot (A + B)} = 0$$





**Given.**

Unit.  $\mathbf{ab} := \mathbf{1}$ 

$$\mathbf{N}_1 := 3.17356 \quad \mathbf{N}_2 := 2.25963$$

$$\mathbf{N}_3 := 1.85348 \quad \mathbf{N}_4 := 4.80800$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3} \quad \mathbf{D} := \frac{1}{N_4}$$

### Descriptions.

$$\mathbf{ad} := \frac{N_1 \cdot N_2}{N_1 + N_2} \quad \mathbf{ac} := \frac{\mathbf{ad} \cdot N_3}{\mathbf{ad} + N_3}$$

$$\mathbf{ce} := \frac{\mathbf{ac}}{\mathbf{N}_3} \quad \mathbf{R}_1 := \mathbf{N}_4 \cdot (1 - \mathbf{ce})$$

$$\mathbf{R}_1 = 2.808246$$

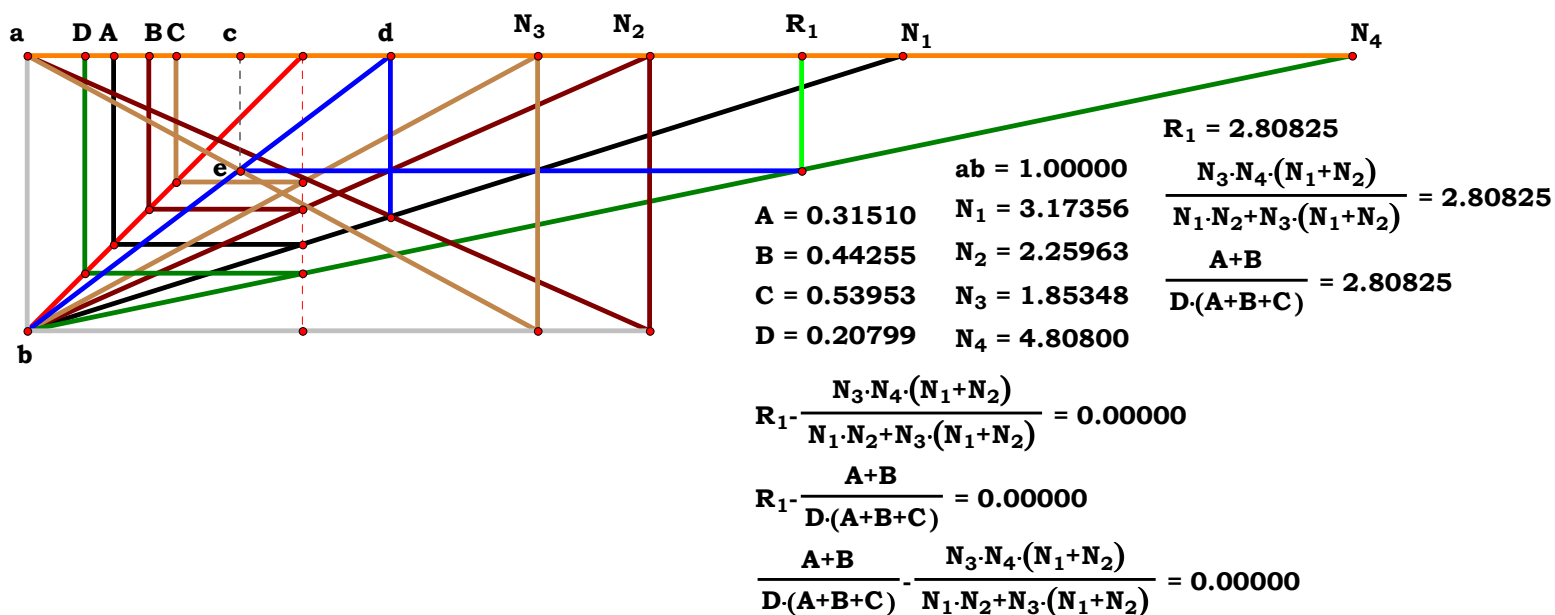
### Definitions.

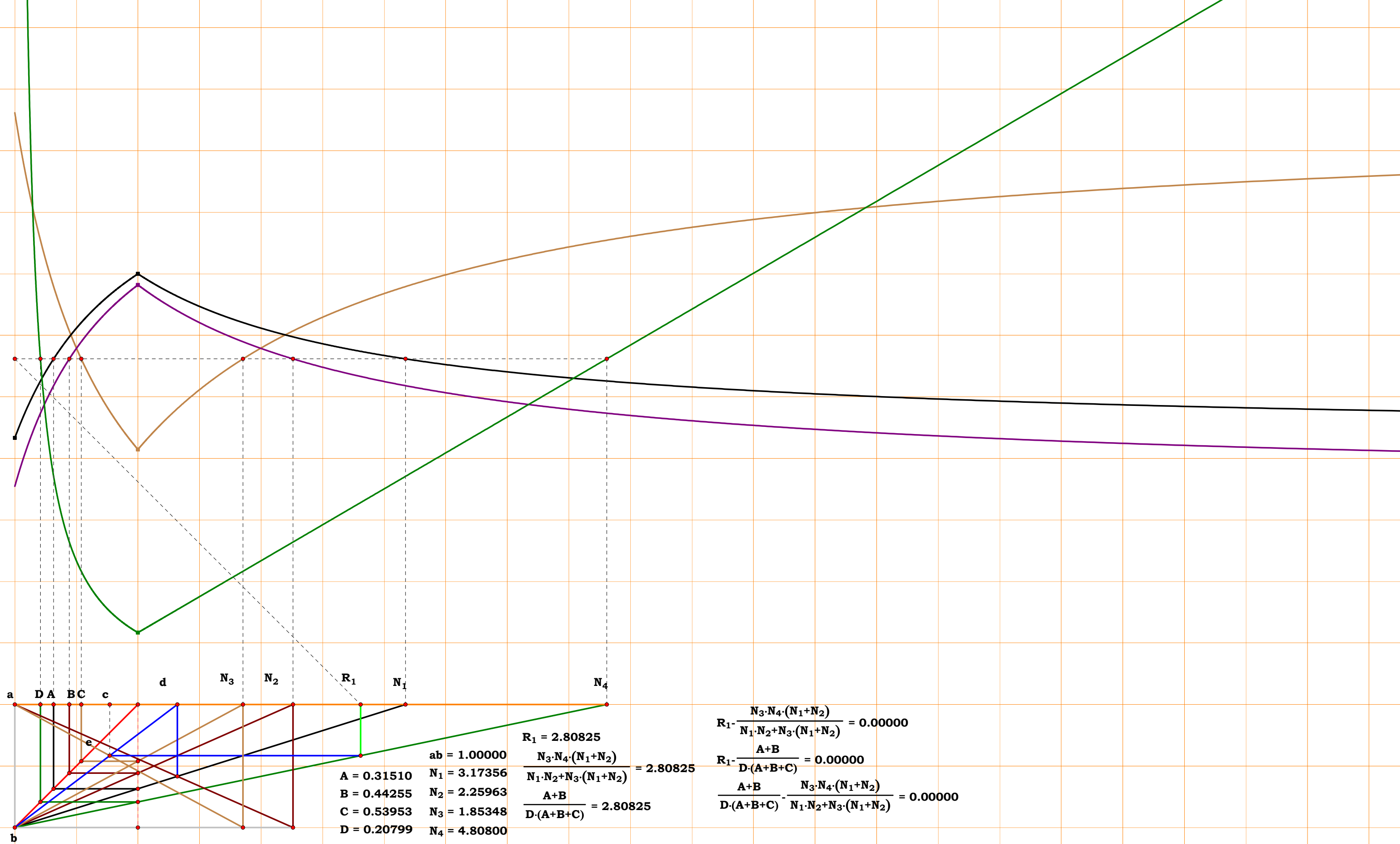
$$R_1 - \frac{N_3 \cdot N_4 \cdot (N_1 + N_2)}{N_1 \cdot N_2 + N_3 \cdot (N_1 + N_2)} = 0$$

$$\mathbf{N}_1 - \frac{1}{\mathbf{A}} = 0 \quad \mathbf{N}_2 - \frac{1}{\mathbf{B}} = 0$$

$$\mathbf{N}_3 - \frac{1}{\mathbf{C}} = 0 \quad \mathbf{N}_4 - \frac{1}{\mathbf{D}} = 0$$

$$\mathbf{R}_1 - \frac{(\mathbf{A} + \mathbf{B})}{\mathbf{D} \cdot (\mathbf{A} + \mathbf{B} + \mathbf{C})} = \mathbf{0}$$









1CST2R6

Given.

Unit.  $ab := 1$

$N_1 := 4.16164$   $N_2 := 1.79591$

$N_3 := 1.38971$   $N_4 := 2.87533$

$A := \frac{1}{N_1}$   $B := \frac{1}{N_2}$   $C := \frac{1}{N_3}$   $D := \frac{1}{N_4}$

Descriptions.

$af := \frac{N_1 \cdot N_2}{N_1 + N_2}$   $ac := \frac{af \cdot N_3}{af + N_3}$

$cd := \frac{ac}{N_3}$   $ae := N_4 \cdot (1 - cd)$

$R_1 := \frac{ae}{cd}$   $R_1 = 3.185154$

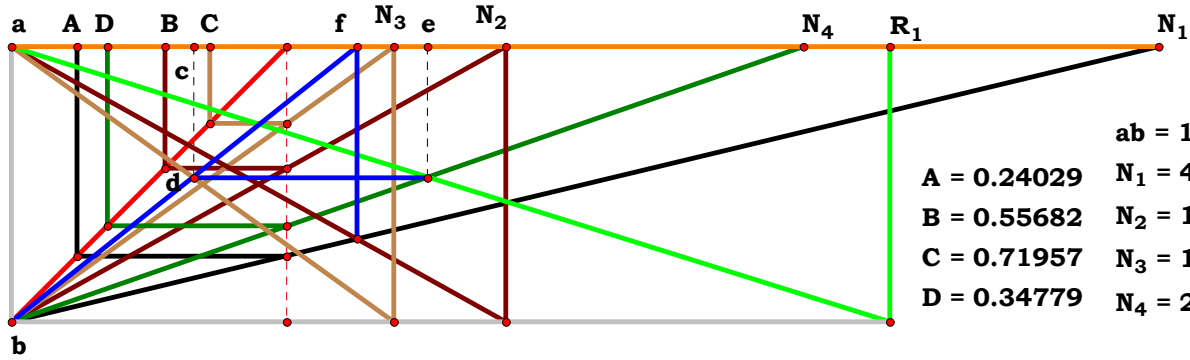
Definitions.

$R_1 - \frac{N_3 \cdot N_4 \cdot (N_1 + N_2)}{N_1 \cdot N_2} = 0$

$N_1 - \frac{1}{A} = 0$   $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$   $N_4 - \frac{1}{D} = 0$

$R_1 - \frac{(A + B)}{C \cdot D} = 0$



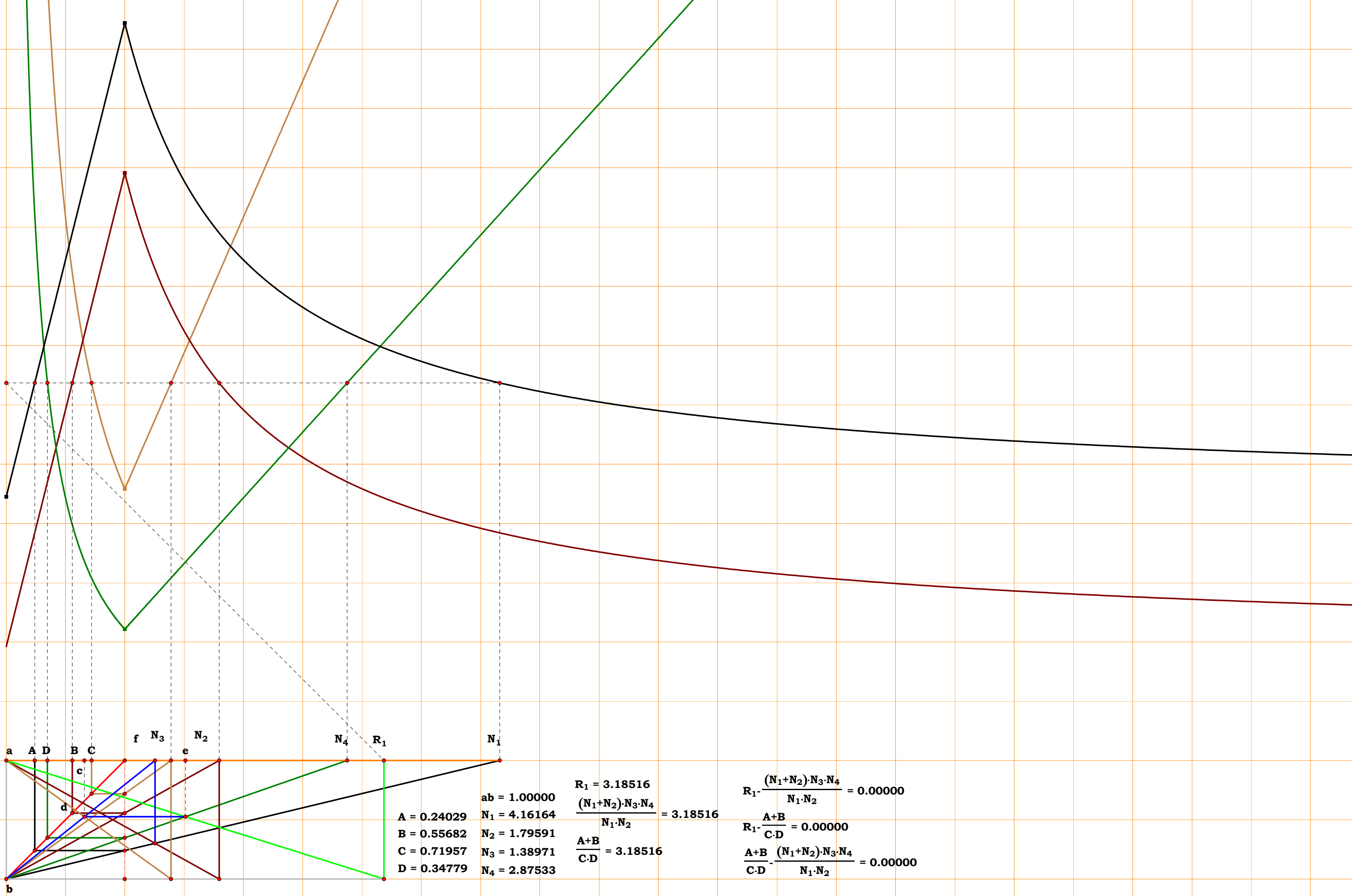
$ab = 1.00000$   
 $A = 0.24029$   $N_1 = 4.16164$   
 $B = 0.55682$   $N_2 = 1.79591$   
 $C = 0.71957$   $N_3 = 1.38971$   
 $D = 0.34779$   $N_4 = 2.87533$

$R_1 - \frac{(N_1 + N_2) \cdot N_3 \cdot N_4}{N_1 \cdot N_2} = 0.00000$

$R_1 - \frac{A + B}{C \cdot D} = 0.00000$

$\frac{A + B}{C \cdot D} - \frac{(N_1 + N_2) \cdot N_3 \cdot N_4}{N_1 \cdot N_2} = 0.00000$

$R_1 = 3.18516$   
 $\frac{(N_1 + N_2) \cdot N_3 \cdot N_4}{N_1 \cdot N_2} = 3.18516$   
 $\frac{A + B}{C \cdot D} = 3.18516$





**Given.**  
**Unit.**    $ab := 1$     $N_1 := 3.19415$     $N_2 := 1.77326$   
 $N_3 := 2.52252$     $N_4 := 1.53229$

$$A := \frac{1}{N_1} \quad B := \frac{1}{N_2} \quad C := \frac{1}{N_3} \quad D := \frac{1}{N_4}$$

**Descriptions.**

$$ae := \frac{N_1 \cdot N_2}{N_1 + N_2} \qquad ac := \frac{ae \cdot N_3}{ae + N_3}$$

$$cd := \frac{ac}{N_3} \qquad R_1 := \frac{N_4}{cd}$$

$$R_1 = 4.92212$$

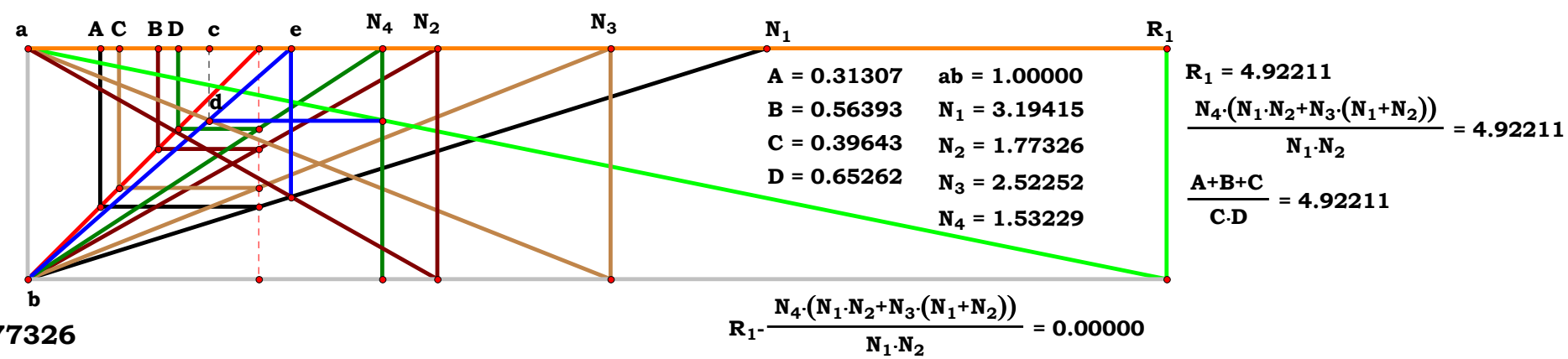
**Definitions.**

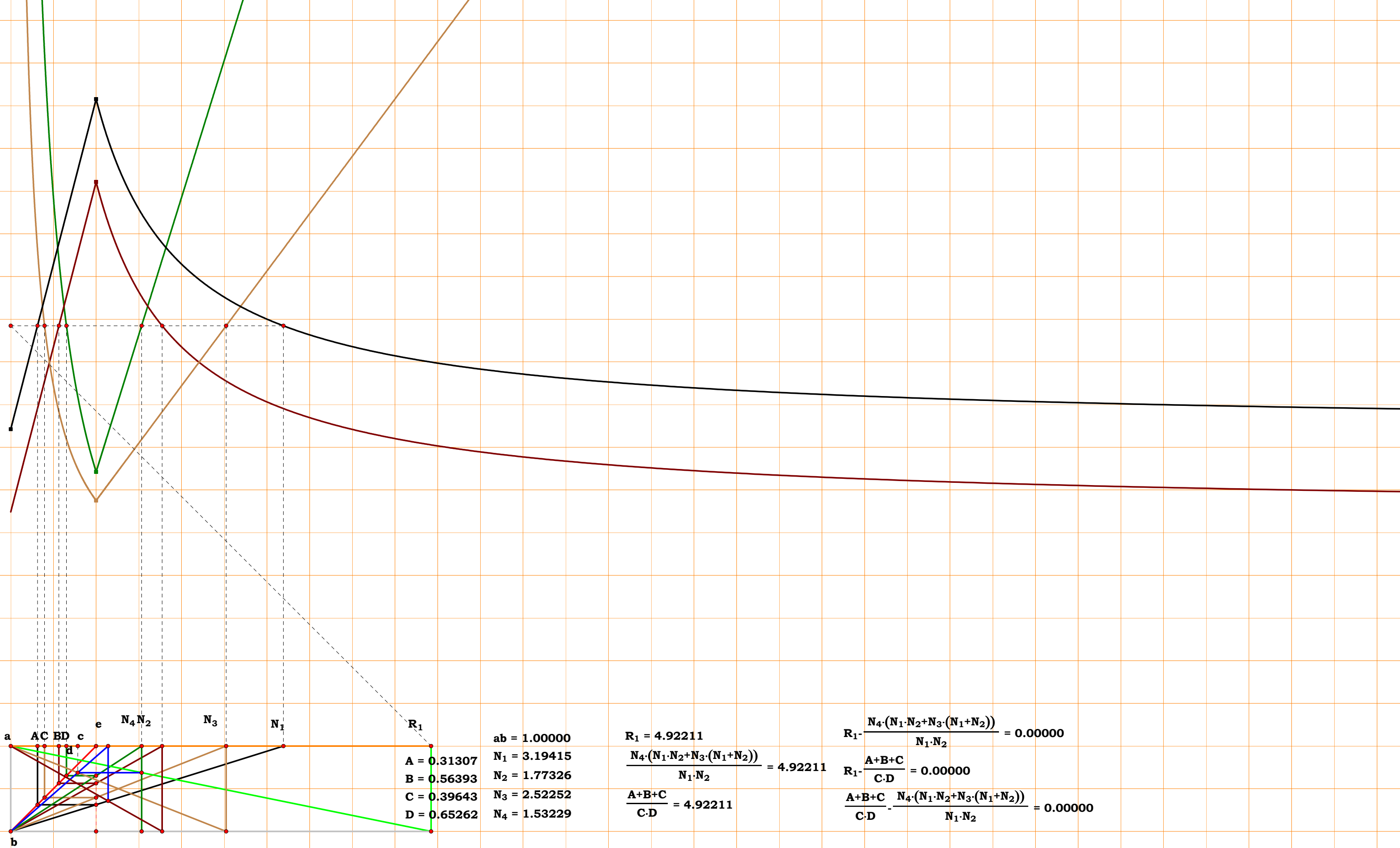
$$R_1 - \frac{N_4 \cdot \left[ N_1 \cdot N_2 + N_3 \cdot (N_1 + N_2) \right]}{N_1 \cdot N_2} = 0$$

$$N_1 - \frac{1}{A} = 0 \qquad N_2 - \frac{1}{B} = 0$$

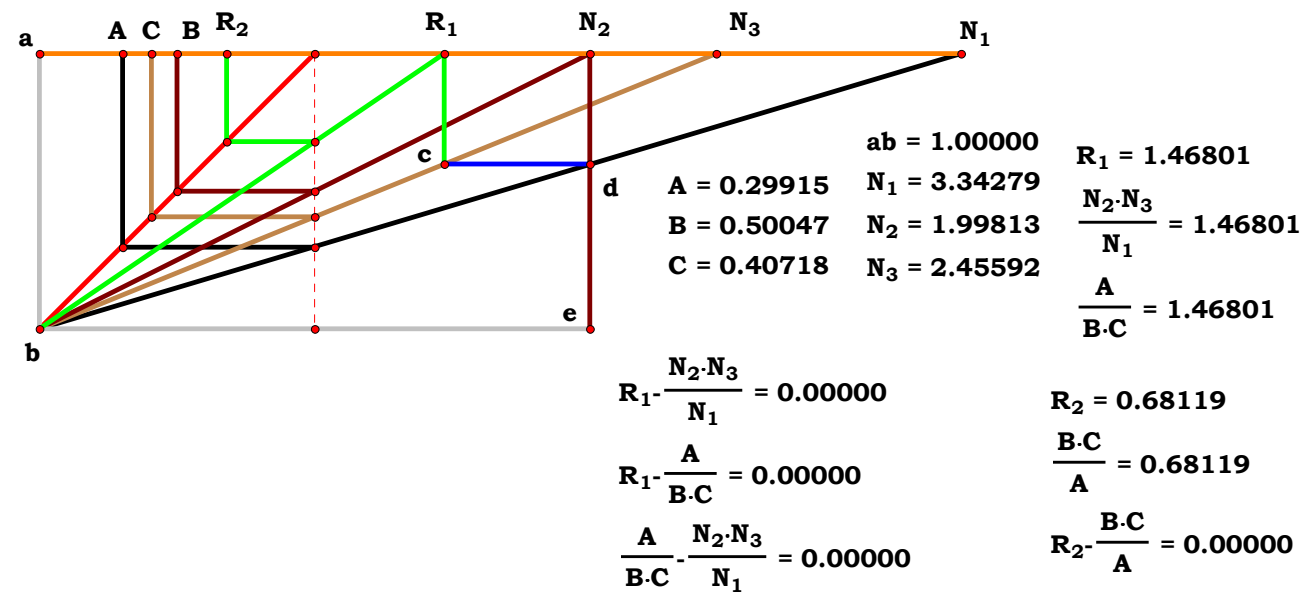
$$N_3 - \frac{1}{C} = 0 \qquad N_4 - \frac{1}{D} = 0$$

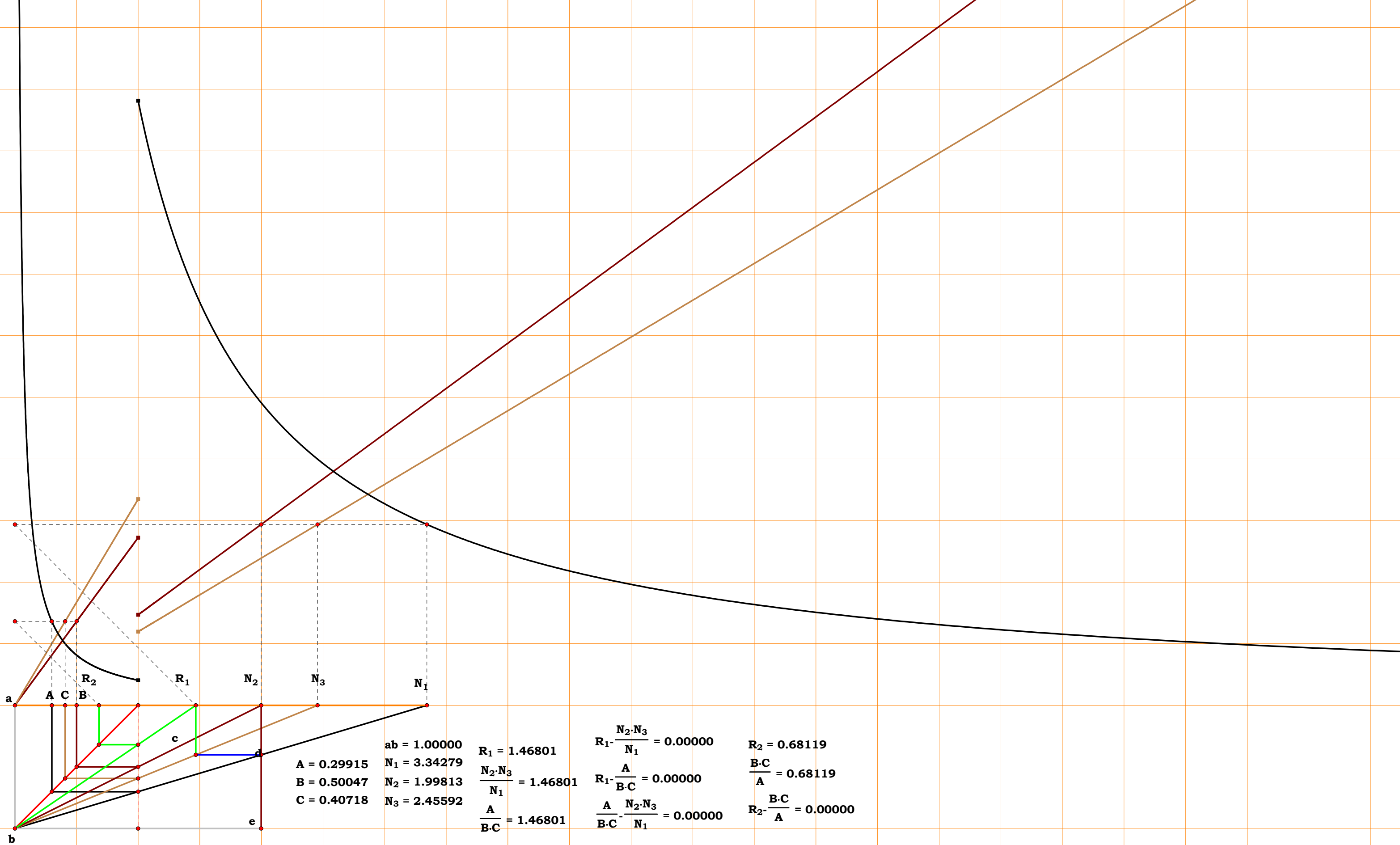
$$R_1 - \frac{(A + B + C)}{C \cdot D} = 0$$

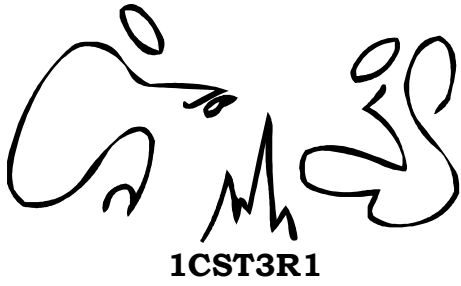




**1CST3R0**

Unit.  $ab := 1$      $N_1 := 3.34279$ 
$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3}$$
$$\mathbf{de} := \frac{N_2}{N_1} \quad \mathbf{cr} := 1 - \mathbf{de}$$
$$\mathbf{R}_1 = 1.468009 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$
$$\mathbf{R}_1 - \frac{\mathbf{N}_2 \cdot \mathbf{N}_3}{\mathbf{N}_1} = 0$$
$$\mathbf{N}_1 - \frac{1}{\mathbf{A}} = 0 \quad \mathbf{N}_2 - \frac{1}{\mathbf{B}} = 0 \quad \mathbf{N}_3 - \frac{1}{\mathbf{C}} = 0$$
$$R_1 - \frac{A}{B \cdot C} = 0 \quad R_2 - \frac{B \cdot C}{A} = 0$$






Given.

Unit.     $ab := 1$      $N_1 := 2.87836$   
 $N_2 := 1.68356$      $N_3 := 4.27828$

$$A := \frac{1}{N_1} \quad B := \frac{1}{N_2} \quad C := \frac{1}{N_3}$$

Descriptions.

$$ad := N_2 \cdot \frac{N_3}{N_1} \quad cR_1 := \frac{N_1 - N_2}{N_1}$$

$$dR_1 := ad \cdot cR_1 \quad R_1 := ad - dR_1$$

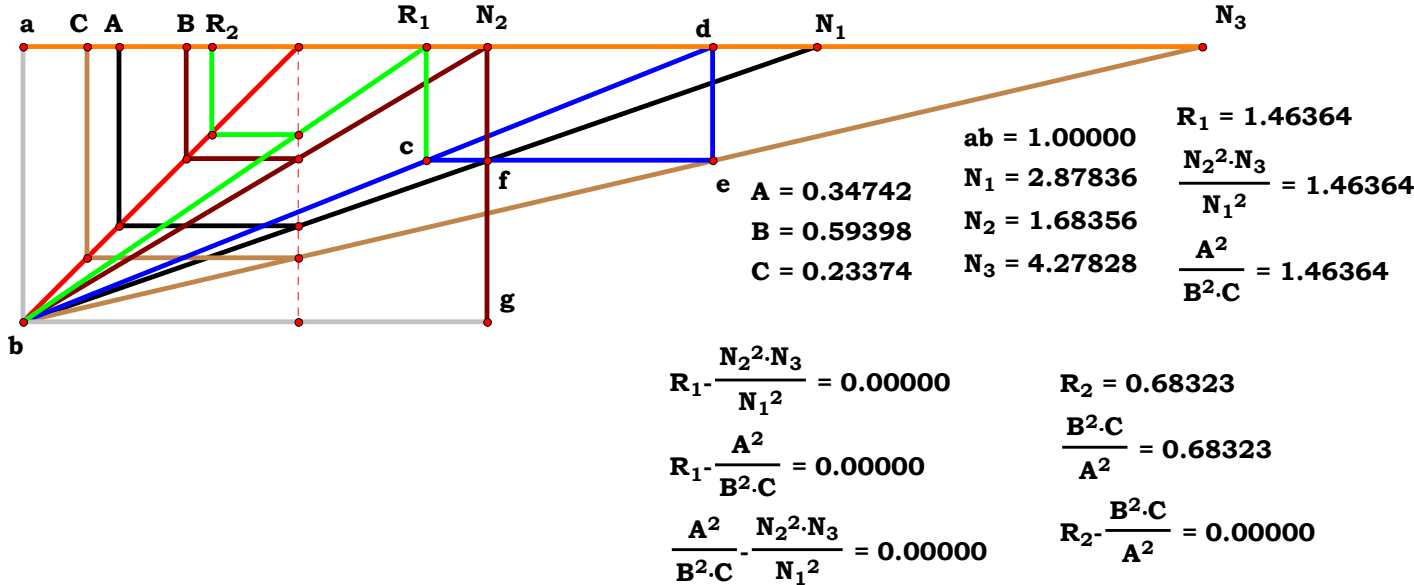
$$R_1 = 1.463646 \quad R_2 := \frac{1}{R_1}$$

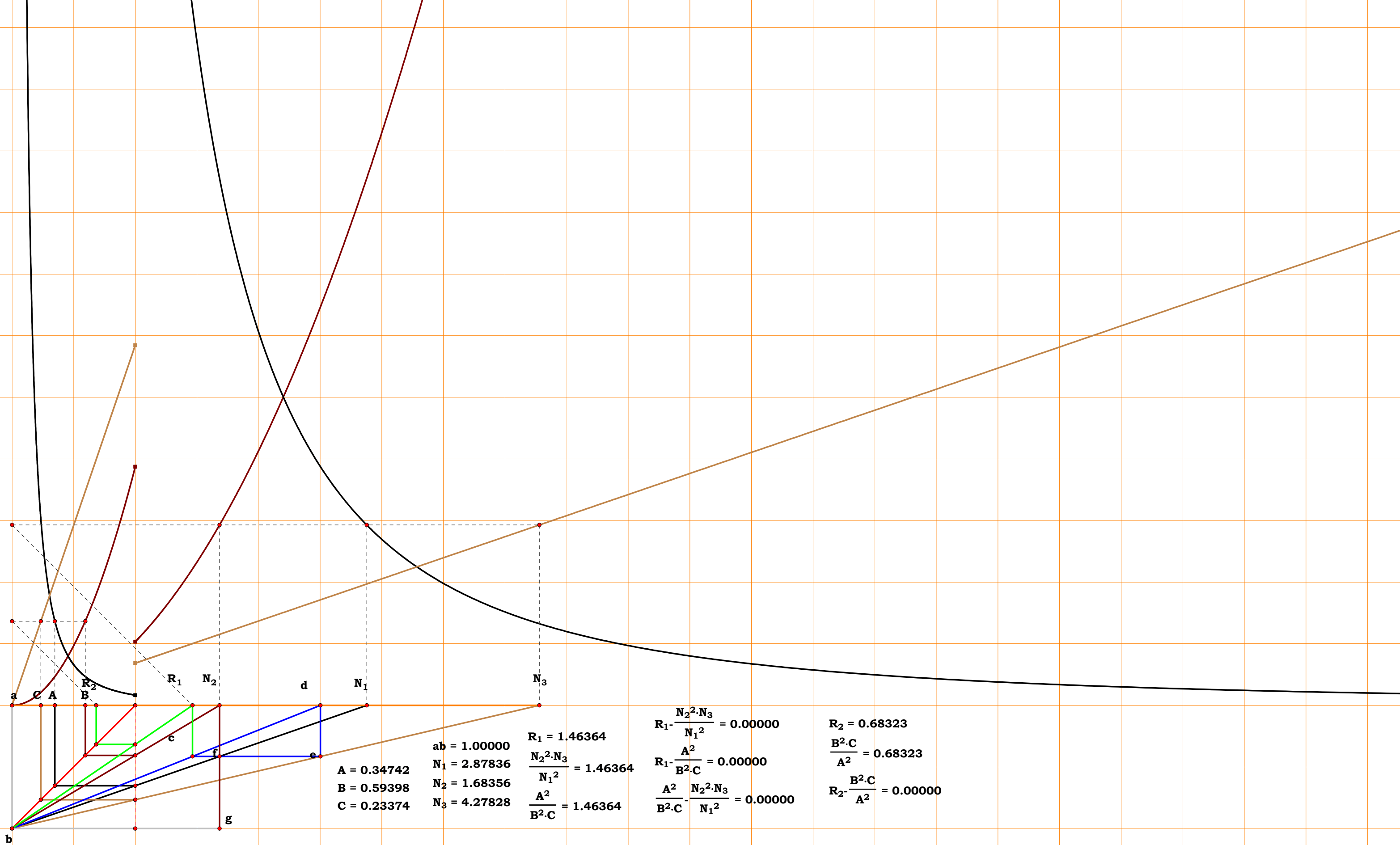
Definitions.

$$R_1 - \frac{N_2^2 \cdot N_3}{N_1^2} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$R_1 - \frac{A^2}{B^2 \cdot C} = 0 \quad R_2 - \frac{B^2 \cdot C}{A^2} = 0$$









1CST3R2

Given.

Unit.  $ab := 1$       $N_1 := 1.91661$

$N_2 := 1.31073$       $N_3 := 3.70270$

$A := \frac{1}{N_1}$       $B := \frac{1}{N_2}$       $C := \frac{1}{N_3}$

Descriptions.

$ad := \frac{N_2^2 \cdot N_3}{N_1^2}$       $cR_1 := \frac{N_1 - N_2}{N_1}$

$dr := ad \cdot cR_1$       $R_1 := ad - dr$

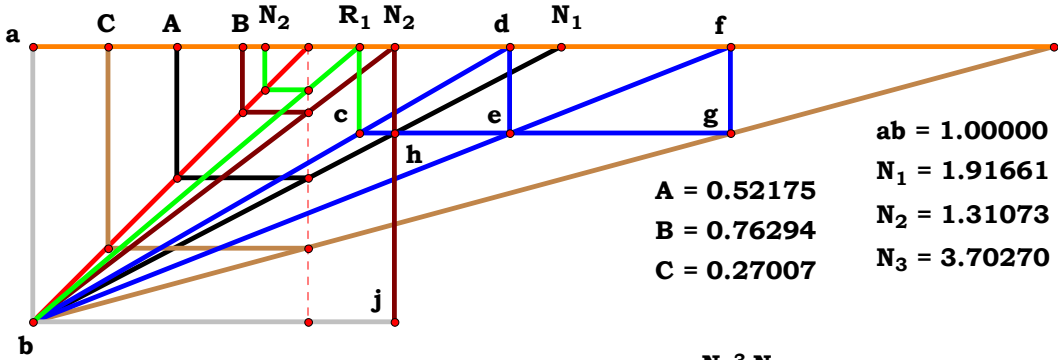
$R_1 = 1.184287$       $R_2 := \frac{1}{R_1}$

Definitions.

$R_1 - \frac{N_2^3 \cdot N_3}{N_1^3} = 0$

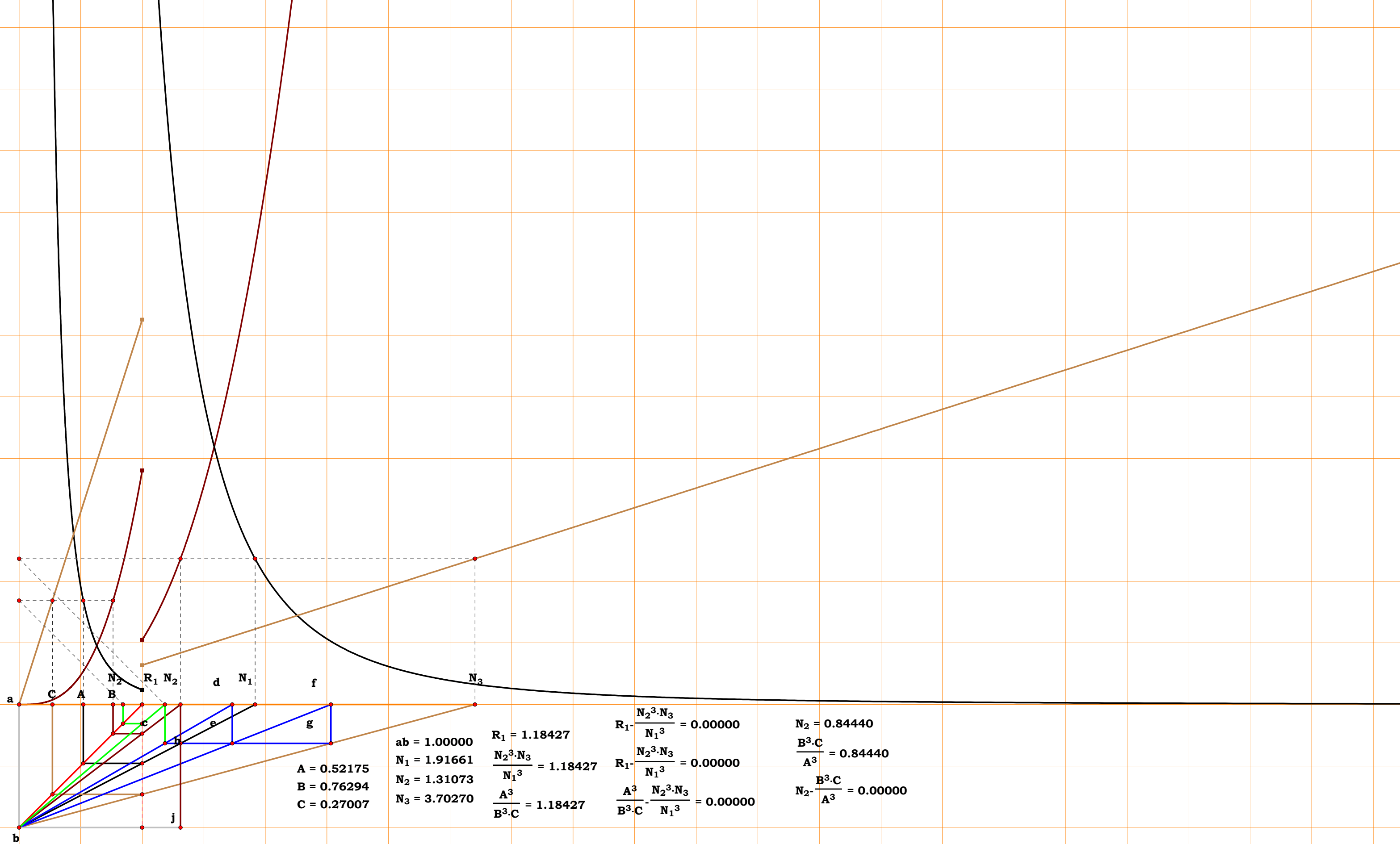
$N_1 - \frac{1}{A} = 0$       $N_2 - \frac{1}{B} = 0$       $N_3 - \frac{1}{C} = 0$

$R_1 - \frac{A^3}{B^3 \cdot C} = 0$       $R_2 - \frac{B^3 \cdot C}{A^3} = 0$



$ab = 1.00000$       $R_1 = 1.18427$   
 $N_1 = 1.91661$       $\frac{N_2^3 \cdot N_3}{N_1^3} = 1.18427$   
 $N_2 = 1.31073$       $\frac{A^3}{B^3 \cdot C} = 1.18427$   
 $C = 0.27007$       $N_3 = 3.70270$

$R_1 - \frac{N_2^3 \cdot N_3}{N_1^3} = 0.00000$       $N_2 = 0.84440$   
 $R_1 - \frac{N_2^3 \cdot N_3}{N_1^3} = 0.00000$       $\frac{B^3 \cdot C}{A^3} = 0.84440$   
 $\frac{A^3}{B^3 \cdot C} - \frac{N_2^3 \cdot N_3}{N_1^3} = 0.00000$       $N_2 - \frac{B^3 \cdot C}{A^3} = 0.00000$





Given.

Unit.  $ab := 1 \quad N_1 := 2.42893$

$N_2 := 1.55071 \quad N_3 := 4.39317$

$A := \frac{1}{N_1} \quad B := \frac{1}{N_2} \quad C := \frac{1}{N_3}$

Descriptions.

$ad := \frac{N_2^3 \cdot N_3}{N_1^3} \quad cd := \frac{N_1 - N_2}{N_1} \quad R_1 := \frac{ad}{cd}$

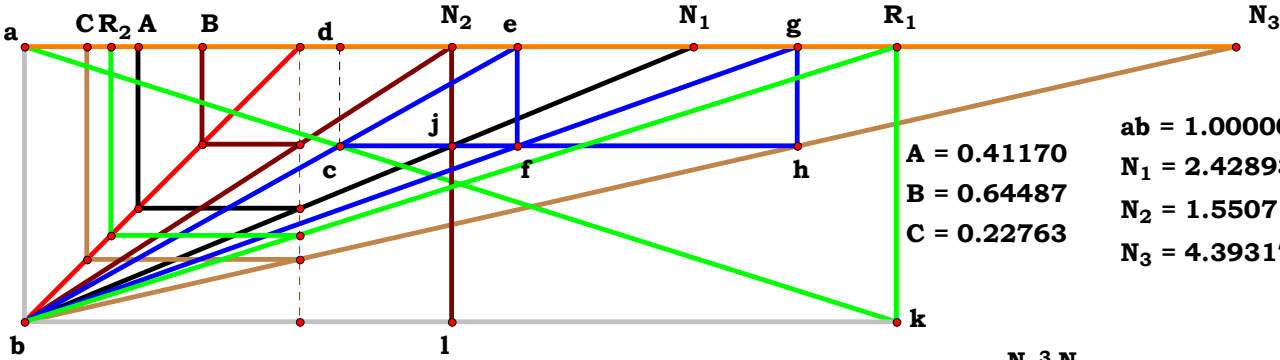
$R_1 = 3.161815 \quad R_2 := \frac{1}{R_1}$

Definitions.

$R_1 - \frac{N_2^3 \cdot N_3}{N_1^2 \cdot (N_1 - N_2)} = 0$

$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$

$R_1 - \frac{A^3}{B^2 \cdot C \cdot (B - A)} = 0 \quad R_2 - \frac{B^2 \cdot C \cdot (B - A)}{A^3} = 0$



$A = 0.41170$   
 $B = 0.64487$   
 $C = 0.22763$

$ab = 1.00000$   
 $N_1 = 2.42893$   
 $N_2 = 1.55071$   
 $N_3 = 4.39317$

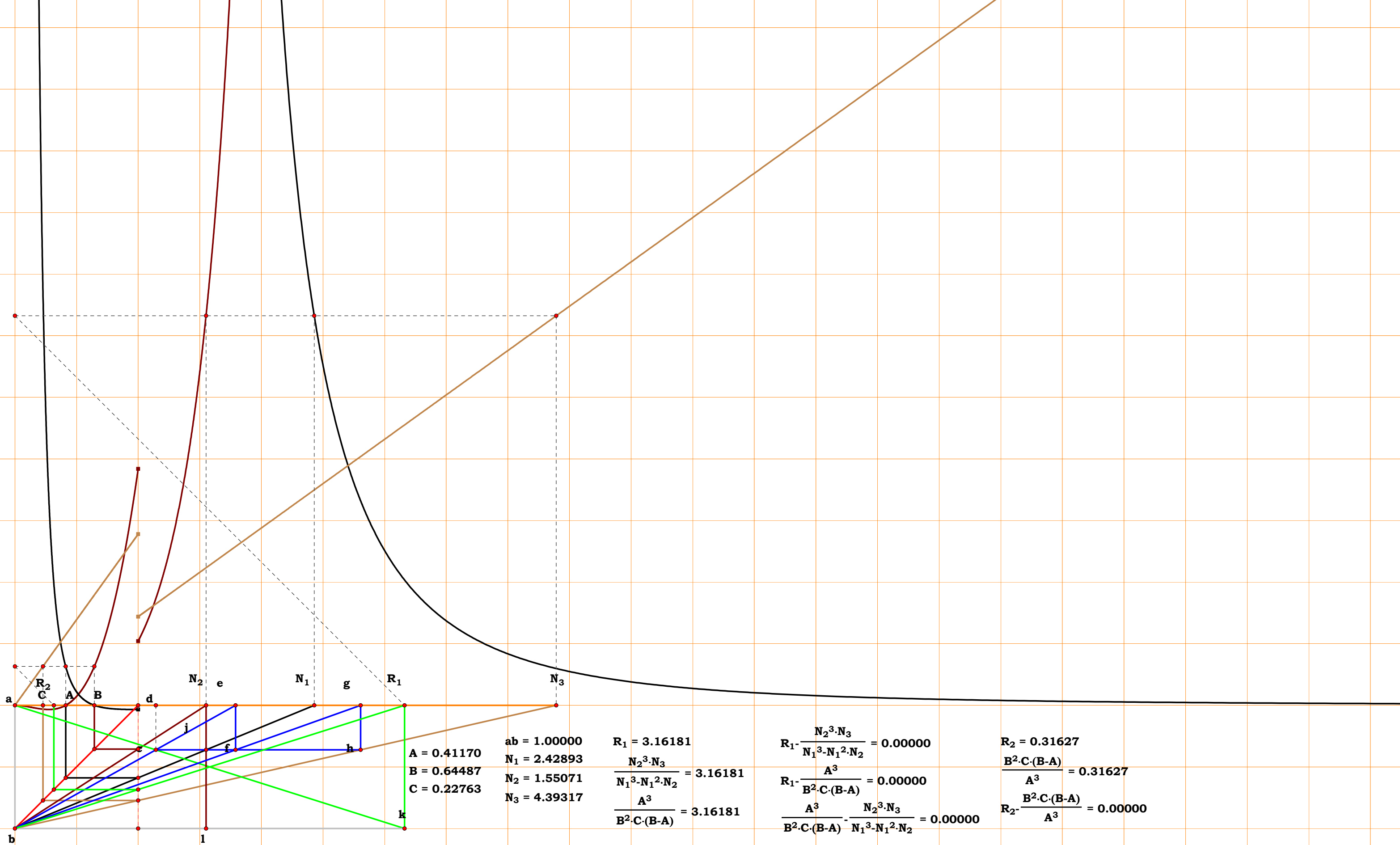
$R_1 = 3.16181$   
 $\frac{N_2^3 \cdot N_3}{N_1^3 \cdot N_1^2 \cdot N_2} = 3.16181$   
 $\frac{A^3}{B^2 \cdot C \cdot (B - A)} = 3.16181$

$R_1 - \frac{N_2^3 \cdot N_3}{N_1^3 \cdot N_1^2 \cdot N_2} = 0.00000$

$R_1 - \frac{A^3}{B^2 \cdot C \cdot (B - A)} = 0.00000$

$\frac{A^3}{B^2 \cdot C \cdot (B - A)} - \frac{N_2^3 \cdot N_3}{N_1^3 \cdot N_1^2 \cdot N_2} = 0.00000$

$R_2 = 0.31627$   
 $\frac{B^2 \cdot C \cdot (B - A)}{A^3} = 0.31627$   
 $R_2 - \frac{B^2 \cdot C \cdot (B - A)}{A^3} = 0.00000$





**Given.**

Unit.  $\mathbf{ab} := 1$        $\mathbf{N}_1 := 4.96776$

$$\mathbf{N}_2 := 3.20528 \quad \mathbf{N}_3 := 2.20432$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3}$$

### Descriptions.

$$\mathbf{cd} := \frac{N_1 - N_2}{N_1} \quad \mathbf{ac} := \frac{N_2^2 \cdot N_3}{N_1^2} \quad \mathbf{R}_1 := \frac{\mathbf{ac}}{\mathbf{cd}}$$

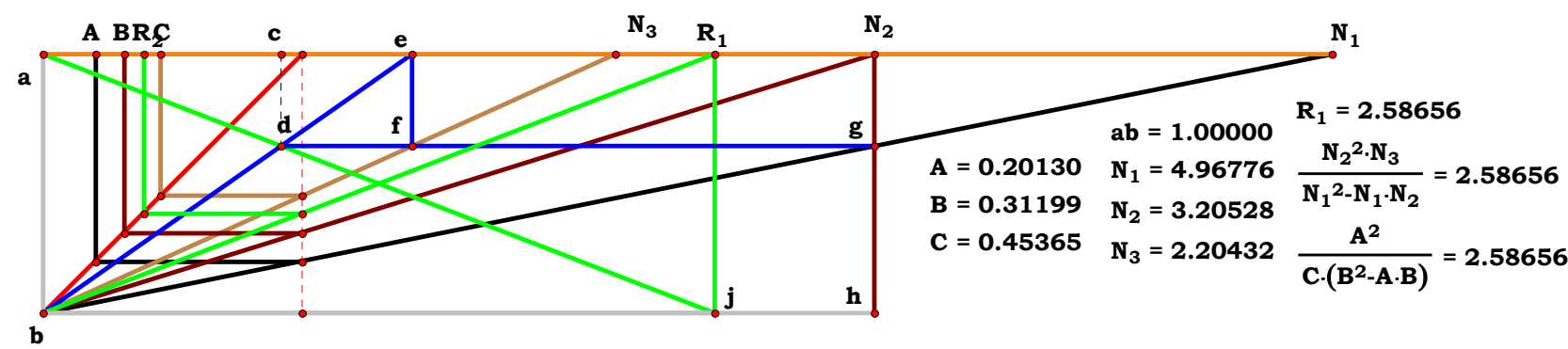
$$\mathbf{R}_1 = 2.586555 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$

### Definitions.

$$R_1 - \frac{N_2^2 \cdot N_3}{N_1 \cdot (N_1 - N_2)} = 0$$

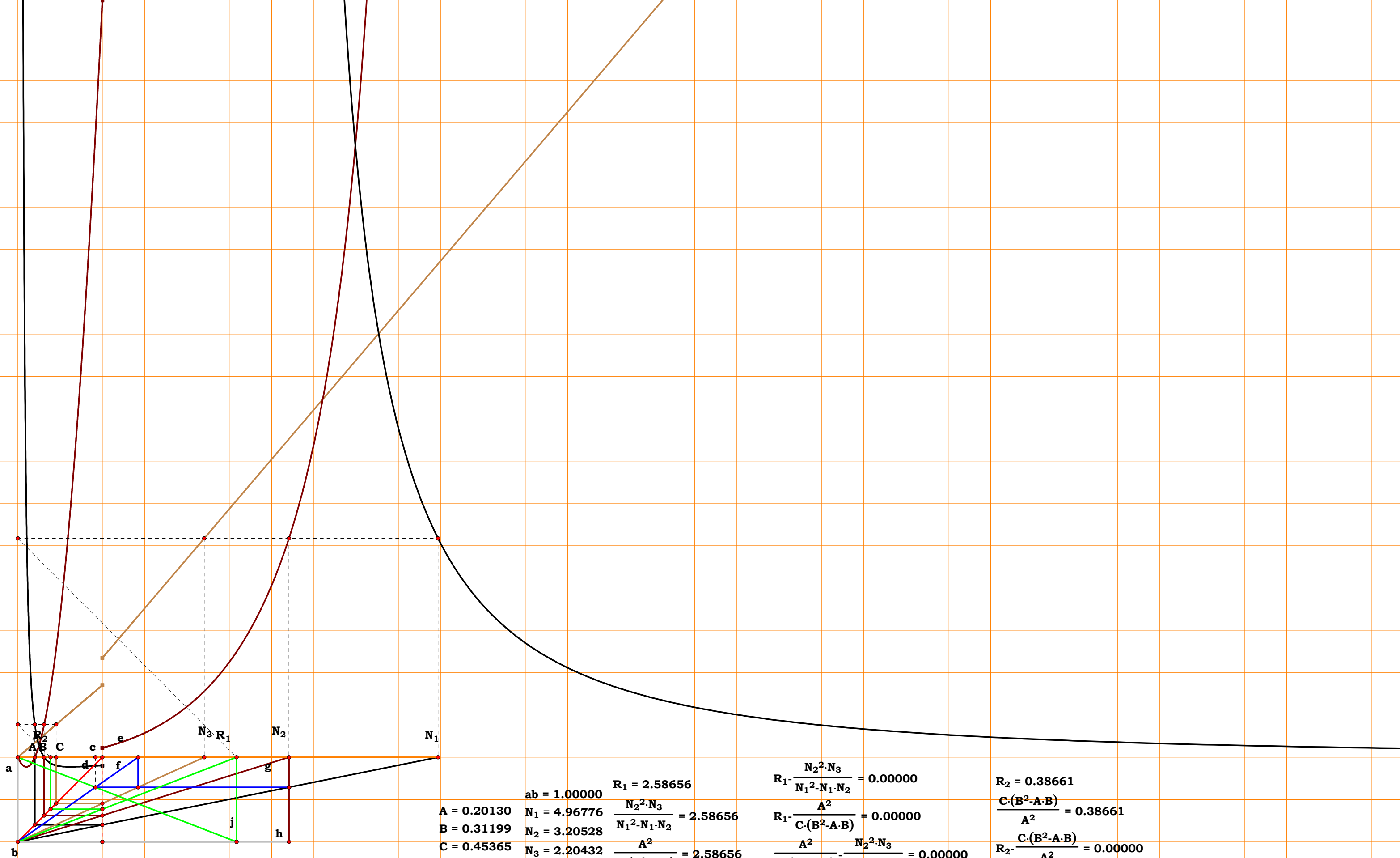
$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$R_1 - \frac{A^2}{C \cdot (B^2 - A \cdot B)} = 1.7, R_2 - \frac{C \cdot (B^2 - A \cdot B)}{A^2} = 0$$



	<b>ab = 1.00000</b>	<b>R<sub>1</sub> = 2.58656</b>
<b>A = 0.20130</b>	<b>N<sub>1</sub> = 4.96776</b>	$\frac{N_2^2 \cdot N_3}{N_1^2 \cdot N_1 \cdot N_2} = 2.58656$
<b>B = 0.31199</b>	<b>N<sub>2</sub> = 3.20528</b>	
<b>C = 0.45365</b>	<b>N<sub>3</sub> = 2.20432</b>	$\frac{A^2}{C \cdot (B^2 \cdot A \cdot B)} = 2.58656$

$$\begin{aligned} R_1 - \frac{N_2^2 \cdot N_3}{N_1^2 \cdot N_1 \cdot N_2} &= 0.00000 \\ R_1 - \frac{A^2}{C \cdot (B^2 \cdot A \cdot B)} &= 0.00000 \\ \frac{A^2}{C \cdot (B^2 \cdot A \cdot B)} - \frac{N_2^2 \cdot N_3}{N_1^2 \cdot N_1 \cdot N_2} &= 0.00000 \end{aligned}$$



**1CST3R5**

**Unit.    $\mathbf{ab} := 1$     $\mathbf{N_1} := 4.64493$**

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3}$$

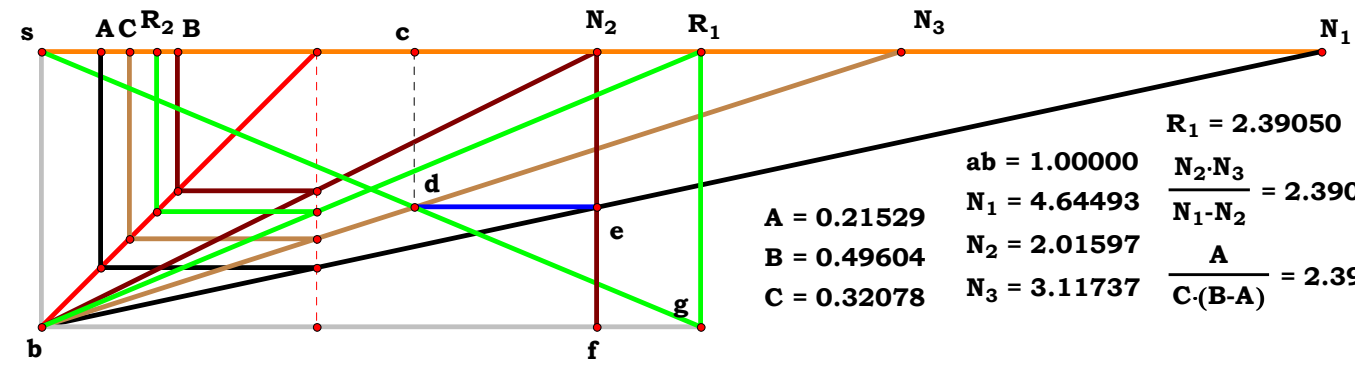
$$\mathbf{ac} := \frac{N_2 \cdot N_3}{N_1} \quad \mathbf{cd} := \frac{N_1 - N_2}{N_1} \quad \mathbf{R}_1 := \frac{\mathbf{ac}}{\mathbf{cd}}$$

$$\mathbf{R}_1 = 2.390498 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$

$$R_1 - \frac{N_2 \cdot N_3}{N_1 - N_2} = 0$$

$$\mathbf{N}_1 - \frac{1}{\mathbf{A}} = 0 \quad \mathbf{N}_2 - \frac{1}{\mathbf{B}} = 0 \quad \mathbf{N}_3 - \frac{1}{\mathbf{C}} = 0$$

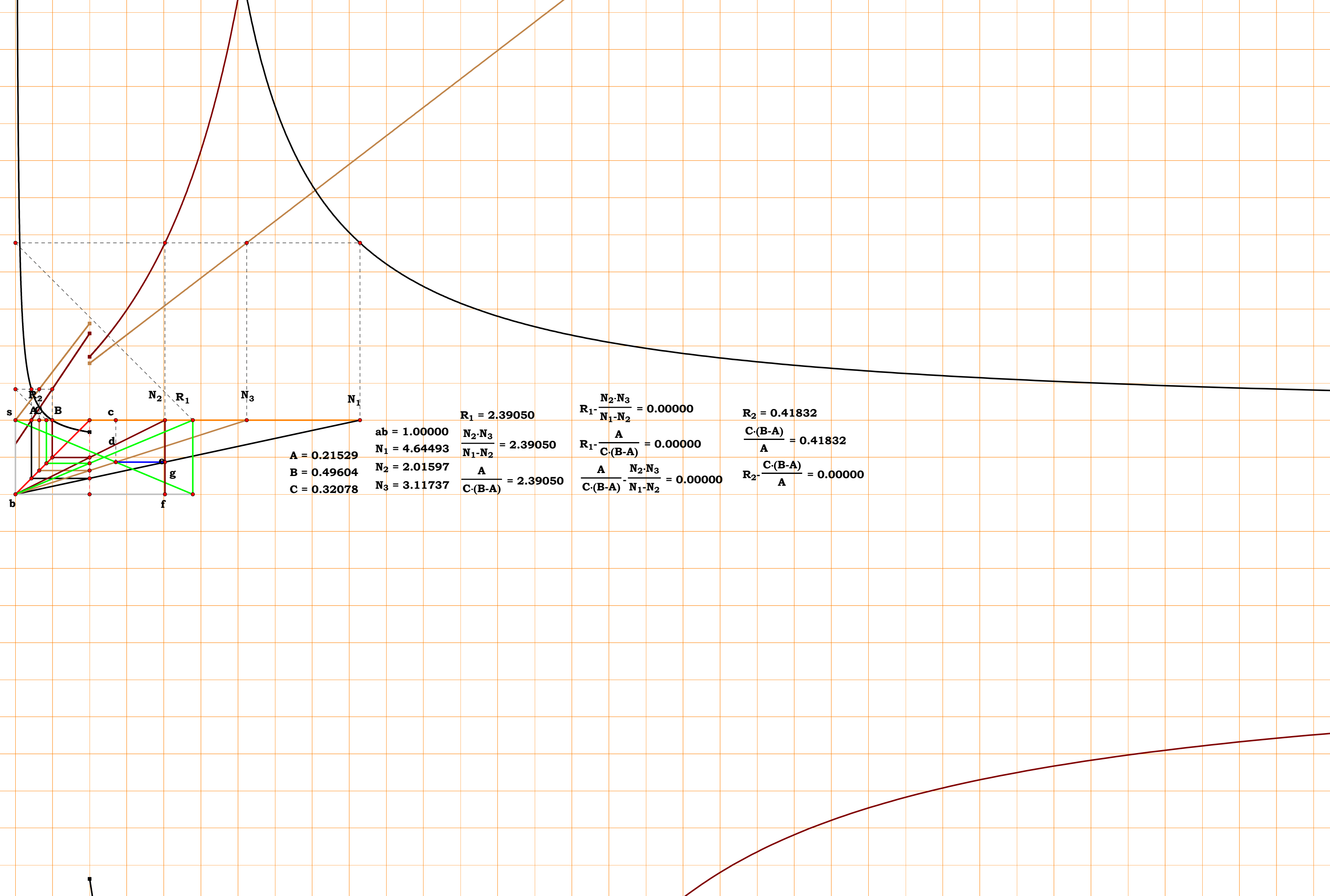
$$\mathbf{R}_1 - \frac{\mathbf{A}}{\mathbf{C} \cdot (\mathbf{B} - \mathbf{A})} = 0 \quad \mathbf{R}_2 - \frac{\mathbf{C} \cdot (\mathbf{B} - \mathbf{A})}{\mathbf{A}} = 0$$



	$ab = 1.00000$	$R_1 = 2.39050$
$A = 0.21529$	$N_1 = 4.64493$	$\frac{N_2 \cdot N_3}{N_1 \cdot N_2} = 2.39050$
$B = 0.49604$	$N_2 = 2.01597$	$\frac{A}{C \cdot (B-A)} = 2.39050$
$C = 0.32078$	$N_3 = 3.11737$	

$R_1 \cdot \frac{N_2 \cdot N_3}{N_1 \cdot N_2} = 0.00000$	$R_2 = 0.41832$
$R_1 \cdot \frac{A}{C \cdot (B-A)} = 0.00000$	$\frac{C \cdot (B-A)}{A} = 0.41832$
$\frac{A}{C \cdot (B-A)} \cdot \frac{N_2 \cdot N_3}{N_1 \cdot N_2} = 0.00000$	$R_2 \cdot \frac{C \cdot (B-A)}{A} = 0.00000$







1CST3R6

Given.

Unit.  $ab := 1$   $N_1 := 2.29912$

$N_2 := 1.68975$   $N_3 := 1.13472$

$N_4 := 2.94955$   $N_5 := 1.89941$

$$A := \frac{1}{N_1} \quad B := \frac{1}{N_2} \quad C := \frac{1}{N_3} \quad D := \frac{1}{N_4} \quad E := \frac{1}{N_5}$$

Descriptions.

$$gN_2 := 1 - \frac{N_2}{N_1} \quad cN_3 := N_3 \cdot gN_2$$

$$ac := N_3 - cN_3 \quad bh := \frac{ac}{gN_2}$$

$$bf := \frac{bh \cdot N_4}{bh + N_4} \quad ef := \frac{bf}{N_4} \quad R_1 := \frac{N_5}{ef}$$

$$R_1 = 3.67992 \quad R_2 := \frac{1}{R_1}$$

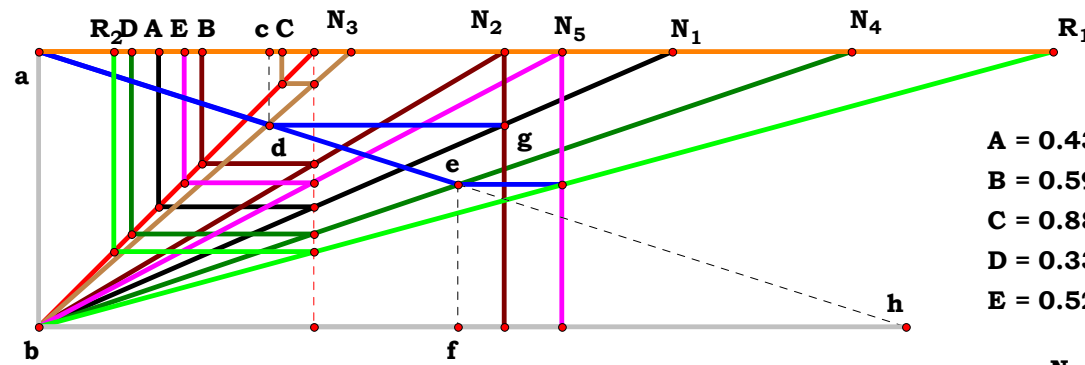
Definitions.

$$R_1 - \frac{N_5 \cdot [N_1 \cdot N_4 + N_2 \cdot (N_3 - N_4)]}{N_2 \cdot N_3} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$N_4 - \frac{1}{D} = 0 \quad N_5 - \frac{1}{E} = 0$$

$$R_1 - \frac{(A \cdot D - A \cdot C + B \cdot C)}{A \cdot D \cdot E} = 0 \quad R_2 - \frac{A \cdot D \cdot E}{(A \cdot D - A \cdot C + B \cdot C)} = 0$$



$$\begin{aligned} A &= 0.43495 \\ B &= 0.59180 \\ C &= 0.88128 \\ D &= 0.33904 \\ E &= 0.52648 \end{aligned} \quad \begin{aligned} ab &= 1.00000 \\ N_1 &= 2.29912 \\ N_2 &= 1.68975 \\ N_3 &= 1.13472 \\ N_4 &= 2.94955 \\ N_5 &= 1.89941 \end{aligned}$$

$$\begin{aligned} R_1 &= 3.67991 \\ \frac{N_5 \cdot (N_1 \cdot N_4 + N_2 \cdot (N_3 - N_4))}{N_2 \cdot N_3} &= 3.67991 \\ \frac{(A \cdot D - A \cdot C) + B \cdot C}{A \cdot D \cdot E} &= 3.67991 \end{aligned}$$

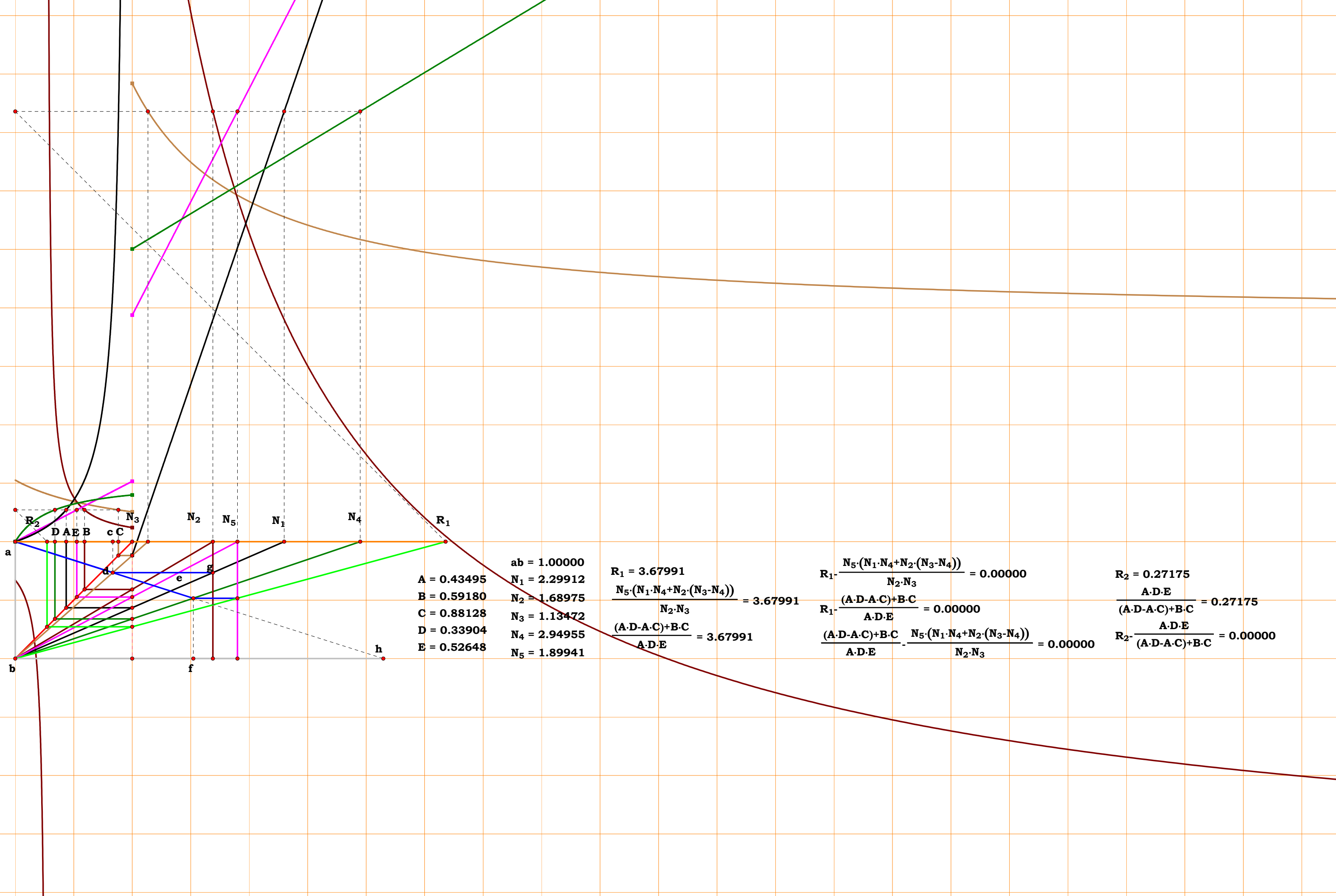
$$R_1 - \frac{N_5 \cdot (N_1 \cdot N_4 + N_2 \cdot (N_3 - N_4))}{N_2 \cdot N_3} = 0.00000$$

$$R_1 - \frac{(A \cdot D - A \cdot C) + B \cdot C}{A \cdot D \cdot E} = 0.00000$$

$$\frac{(A \cdot D - A \cdot C) + B \cdot C}{A \cdot D \cdot E} - \frac{N_5 \cdot (N_1 \cdot N_4 + N_2 \cdot (N_3 - N_4))}{N_2 \cdot N_3} = 0.00000$$

$$\begin{aligned} R_2 &= 0.27175 \\ \frac{A \cdot D \cdot E}{(A \cdot D - A \cdot C) + B \cdot C} &= 0.27175 \end{aligned}$$

$$R_2 - \frac{A \cdot D \cdot E}{(A \cdot D - A \cdot C) + B \cdot C} = 0.00000$$



A = 0.43495  
B = 0.59180  
C = 0.88128  
D = 0.33904  
E = 0.52648

ab = 1.00000  
N<sub>1</sub> = 2.29912  
N<sub>2</sub> = 1.68975  
N<sub>3</sub> = 1.13472  
N<sub>4</sub> = 2.94955  
N<sub>5</sub> = 1.89941

$$R_1 = 3.67991$$
$$\frac{N_5 \cdot (N_1 \cdot N_4 + N_2 \cdot (N_3 - N_4))}{N_2 \cdot N_3} = 3.67991$$
$$\frac{(A \cdot D - A \cdot C) + B \cdot C}{A \cdot D \cdot E} = 3.67991$$

$$R_1 \cdot \frac{N_5 \cdot (N_1 \cdot N_4 + N_2 \cdot (N_3 - N_4))}{N_2 \cdot N_3} = 0.00000$$
$$R_1 \cdot \frac{(A \cdot D - A \cdot C) + B \cdot C}{A \cdot D \cdot E} = 0.00000$$
$$\frac{(A \cdot D - A \cdot C) + B \cdot C}{A \cdot D \cdot E} - \frac{N_5 \cdot (N_1 \cdot N_4 + N_2 \cdot (N_3 - N_4))}{N_2 \cdot N_3} = 0.00000$$

$$R_2 = 0.27175$$
$$\frac{A \cdot D \cdot E}{(A \cdot D - A \cdot C) + B \cdot C} = 0.27175$$
$$R_2 \cdot \frac{A \cdot D \cdot E}{(A \cdot D - A \cdot C) + B \cdot C} = 0.00000$$



Given.

Unit.  $ab := 1$       $N_1 := 2.73480$

$N_2 := 1.77372$      $N_3 := 4.46042$

$$A := \frac{1}{N_1} \quad B := \frac{1}{N_2} \quad C := \frac{1}{N_3}$$

Descriptions.

$$dN_2 := 1 - \frac{N_2}{N_1} \quad R_1 := N_3 \cdot dN_2$$

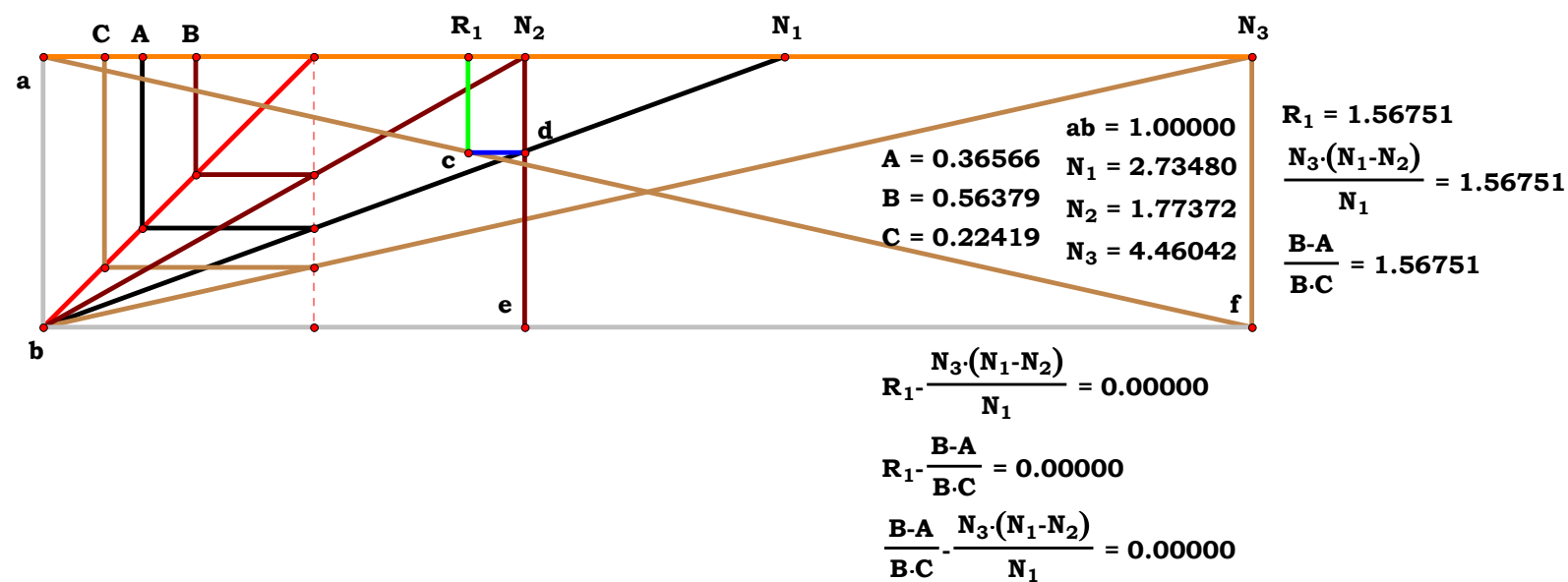
$R_1 = 1.567508$

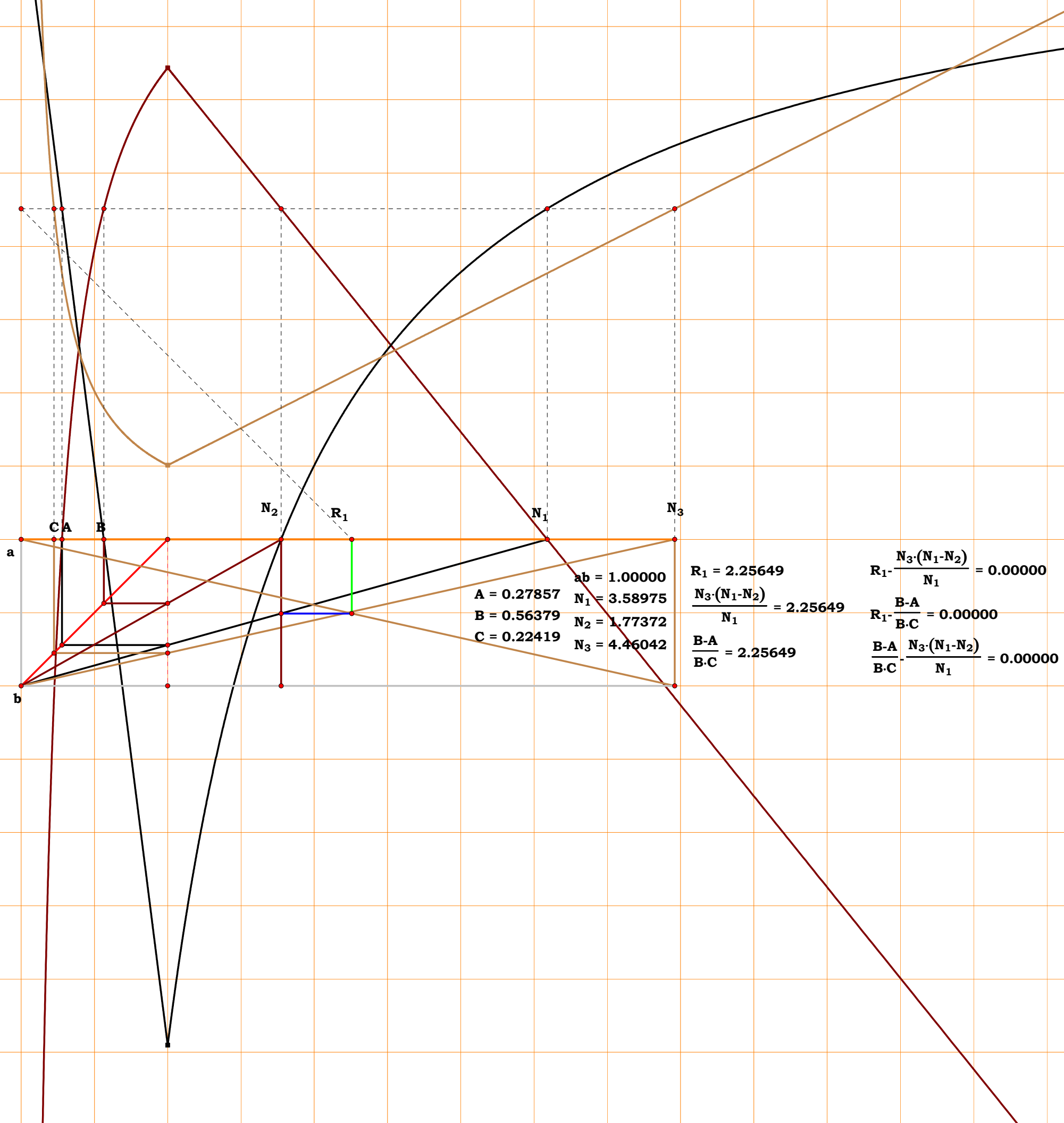
Definitions.

$$R_1 - \frac{N_3 \cdot (N_1 - N_2)}{N_1} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$R_1 - \frac{(B - A)}{B \cdot C} = 0$$





**1CST4R1**

$$\mathbf{N}_2 := 2.25405 \quad \mathbf{N}_3 := 3.17402$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3}$$

$$\mathbf{cd} := \frac{N_1 - N_2}{N_1} \quad \mathbf{ac} := \frac{N_3 \cdot (N_1 - N_2)}{N_1}$$

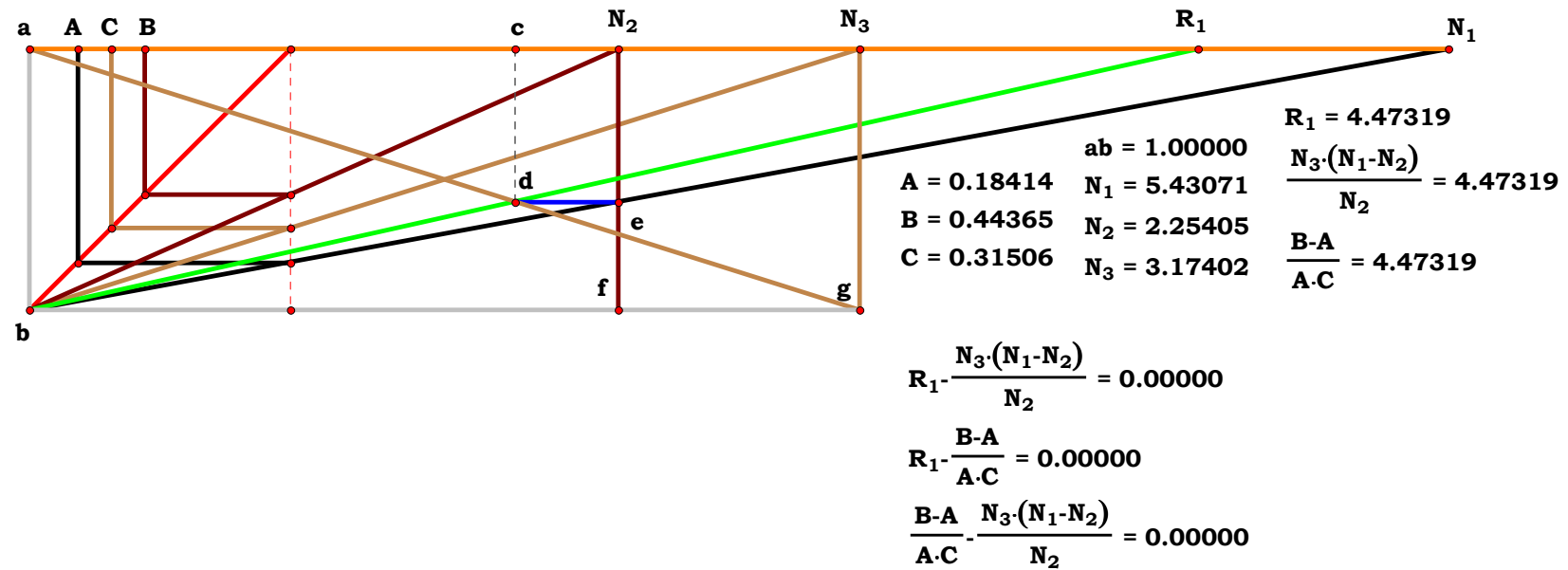
$$\mathbf{R}_1 := \frac{\mathbf{ac}}{\mathbf{1} - \mathbf{cd}}$$

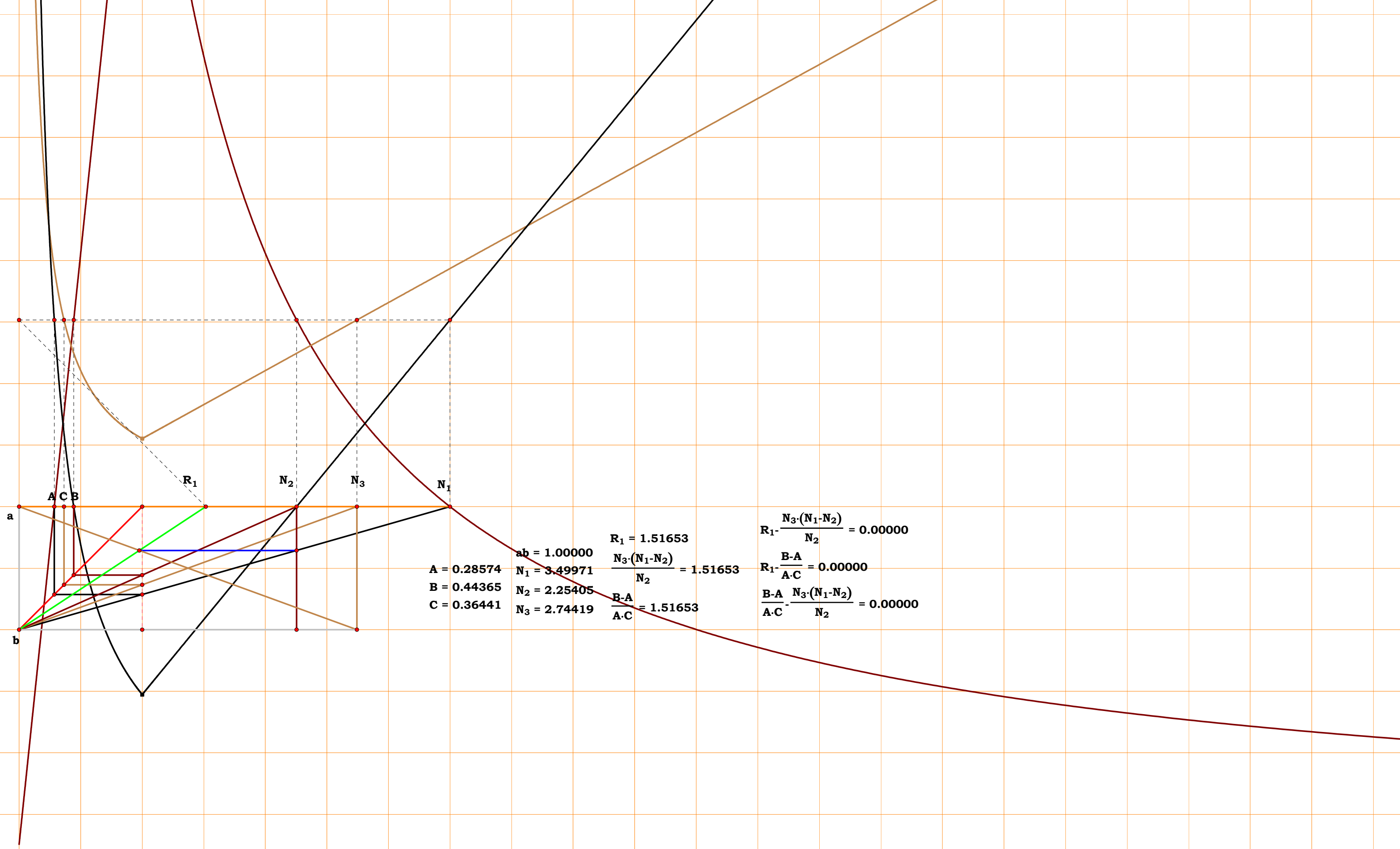
$$\mathbf{R}_1 = 4.473185$$

$$R_1 - \frac{N_3 \cdot (N_1 - N_2)}{N_2} = 0$$

$$\mathbf{N}_1 - \frac{1}{\mathbf{A}} = 0 \quad \mathbf{N}_2 - \frac{1}{\mathbf{B}} = 0 \quad \mathbf{N}_3 - \frac{1}{\mathbf{C}} = 0$$

$$\mathbf{R}_1 - \frac{(\mathbf{B} - \mathbf{A})}{\mathbf{A} \cdot \mathbf{C}} = \mathbf{0}$$





A = 0.28574  
B = 0.44365  
C = 0.36441

ab = 1.00000  
N<sub>1</sub> = 3.49971  
N<sub>2</sub> = 2.25405  
N<sub>3</sub> = 2.74419

R<sub>1</sub> = 1.51653  
 $\frac{N_3 \cdot (N_1 - N_2)}{N_2} = 1.51653$   
 $\frac{B - A}{A \cdot C} = 1.51653$

$R_1 - \frac{N_3 \cdot (N_1 - N_2)}{N_2} = 0.00000$   
 $R_1 - \frac{B - A}{A \cdot C} = 0.00000$   
 $\frac{B - A}{A \cdot C} - \frac{N_3 \cdot (N_1 - N_2)}{N_2} = 0.00000$



1CST4R2

Given.

Unit.  $ab := 1$      $N_1 := 4.15436$

$N_2 := 3.18798$      $N_3 := 2.68162$

$N_4 := 1.41721$      $N_5 := 1.90952$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$      $D := \frac{1}{N_4}$      $E := \frac{1}{N_5}$

Descriptions.

$gN_2 := 1 - \frac{N_2}{N_1}$      $ac := N_3 \cdot gN_2$

$cd := \frac{N_4 - ac}{N_4}$      $bf := N_5 \cdot cd$

$R_1 := \frac{bf}{1 - cd}$      $R_1 = 2.428758$

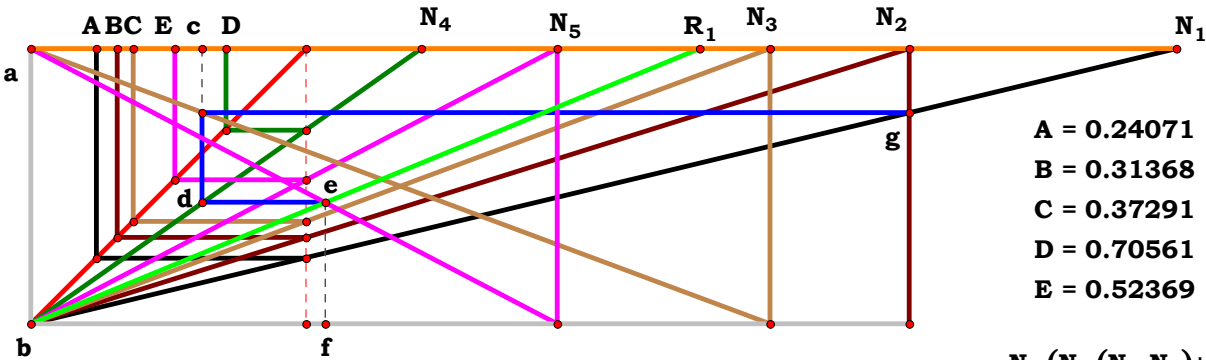
Definitions.

$R_1 - \frac{N_5 \cdot [N_1 \cdot (N_4 - N_3) + N_2 \cdot N_3]}{N_3 \cdot (N_1 - N_2)} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$      $N_4 - \frac{1}{D} = 0$      $N_5 - \frac{1}{E} = 0$

$R_1 - \frac{(A \cdot D + B \cdot C - B \cdot D)}{D \cdot E \cdot (B - A)} = 0$



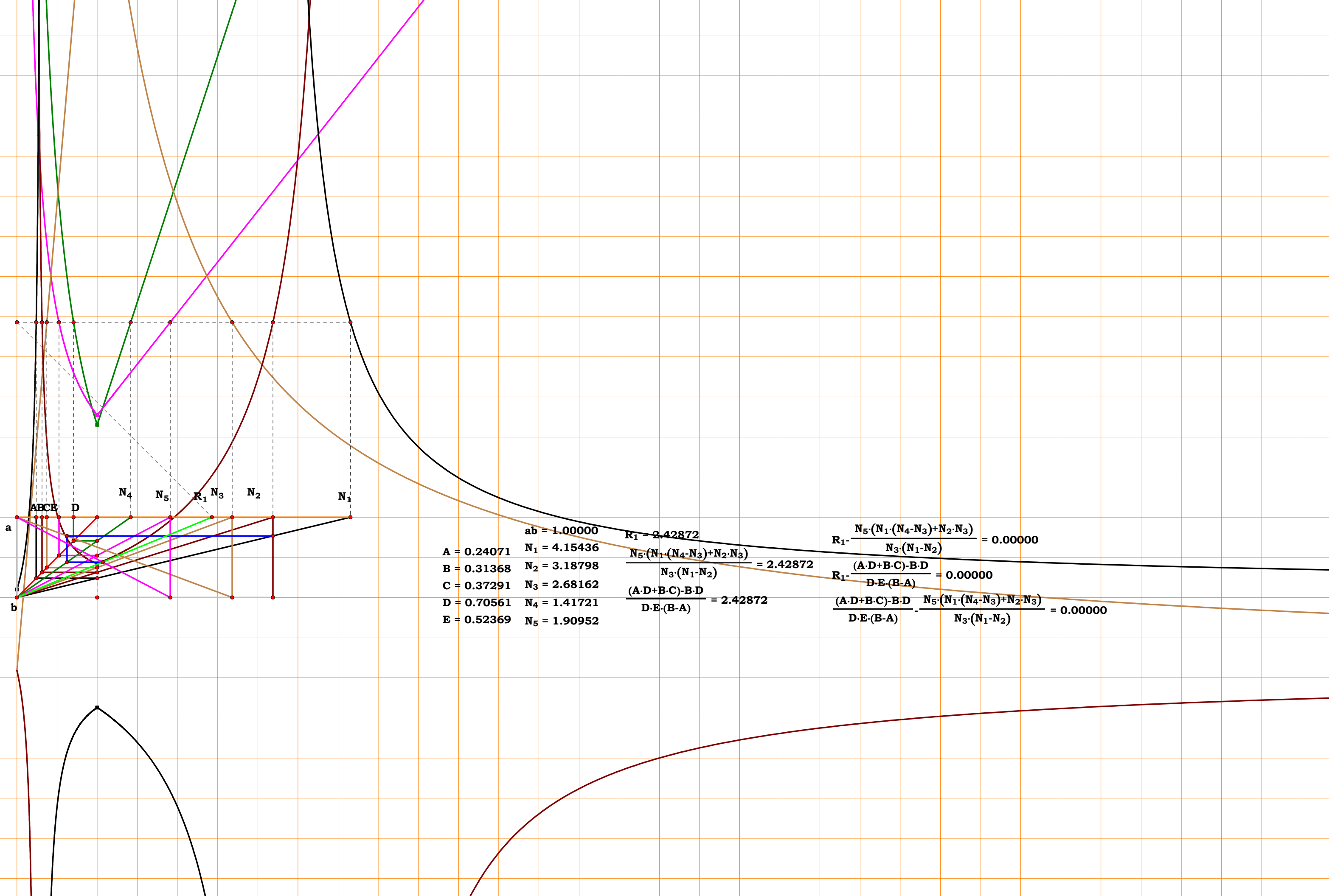
$ab = 1.00000$   
 $A = 0.24071$      $N_1 = 4.15436$   
 $B = 0.31368$      $N_2 = 3.18798$   
 $C = 0.37291$      $N_3 = 2.68162$   
 $D = 0.70561$      $N_4 = 1.41721$   
 $E = 0.52369$      $N_5 = 1.90952$

$R_1 = 2.42872$   
 $\frac{N_5 \cdot (N_1 \cdot (N_4 - N_3) + N_2 \cdot N_3)}{N_3 \cdot (N_1 - N_2)} = 2.42872$   
 $\frac{(A \cdot D + B \cdot C) - B \cdot D}{D \cdot E \cdot (B - A)} = 2.42872$

$R_1 - \frac{N_5 \cdot (N_1 \cdot (N_4 - N_3) + N_2 \cdot N_3)}{N_3 \cdot (N_1 - N_2)} = 0.00000$

$R_1 - \frac{(A \cdot D + B \cdot C) - B \cdot D}{D \cdot E \cdot (B - A)} = 0.00000$

$\frac{(A \cdot D + B \cdot C) - B \cdot D}{D \cdot E \cdot (B - A)} - \frac{N_5 \cdot (N_1 \cdot (N_4 - N_3) + N_2 \cdot N_3)}{N_3 \cdot (N_1 - N_2)} = 0.00000$



$ab = 1.00000$   
 $A = 0.24071$   
 $B = 0.31368$   
 $C = 0.37291$   
 $D = 0.70561$   
 $E = 0.52369$   
 $N_1 = 4.15436$   
 $N_2 = 3.18798$   
 $N_3 = 2.68162$   
 $N_4 = 1.41721$   
 $N_5 = 1.90952$

$$R_1 = 2.42872$$
$$\frac{N_5 \cdot (N_1 \cdot (N_4 - N_3) + N_2 \cdot N_3)}{N_3 \cdot (N_1 - N_2)} = 2.42872$$
$$\frac{(A \cdot D + B \cdot C) - B \cdot D}{D \cdot E \cdot (B - A)} = 2.42872$$

$$R_1 - \frac{N_5 \cdot (N_1 \cdot (N_4 - N_3) + N_2 \cdot N_3)}{N_3 \cdot (N_1 - N_2)} = 0.00000$$
$$R_1 - \frac{(A \cdot D + B \cdot C) - B \cdot D}{D \cdot E \cdot (B - A)} = 0.00000$$
$$\frac{(A \cdot D + B \cdot C) - B \cdot D}{D \cdot E \cdot (B - A)} - \frac{N_5 \cdot (N_1 \cdot (N_4 - N_3) + N_2 \cdot N_3)}{N_3 \cdot (N_1 - N_2)} = 0.00000$$





1CST4R3

Given.

Unit.  $ab := 1$      $N_1 := 4.10374$

$N_2 := 2.50277$      $N_3 := 2.07159$

$N_4 := 1.56463$      $N_5 := 1.75809$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$      $D := \frac{1}{N_4}$      $E := \frac{1}{N_5}$

Descriptions.

$cd := 1 - \frac{N_2}{N_1}$      $ac := N_3 \cdot cd$

$ce := \frac{N_4 - ac}{N_4}$      $R_1 := \frac{N_5}{1 - ce}$

$R_1 = 3.403655$

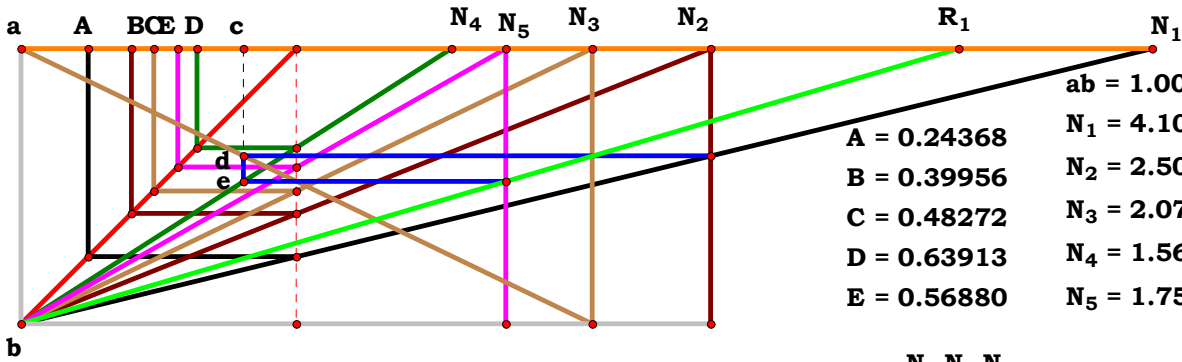
Definitions.

$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_3 - N_2 \cdot N_3} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$      $N_3 - \frac{1}{C} = 0$

$N_4 - \frac{1}{D} = 0$      $N_5 - \frac{1}{E} = 0$

$R_1 - \frac{B \cdot C}{D \cdot E \cdot (B - A)} = 0$



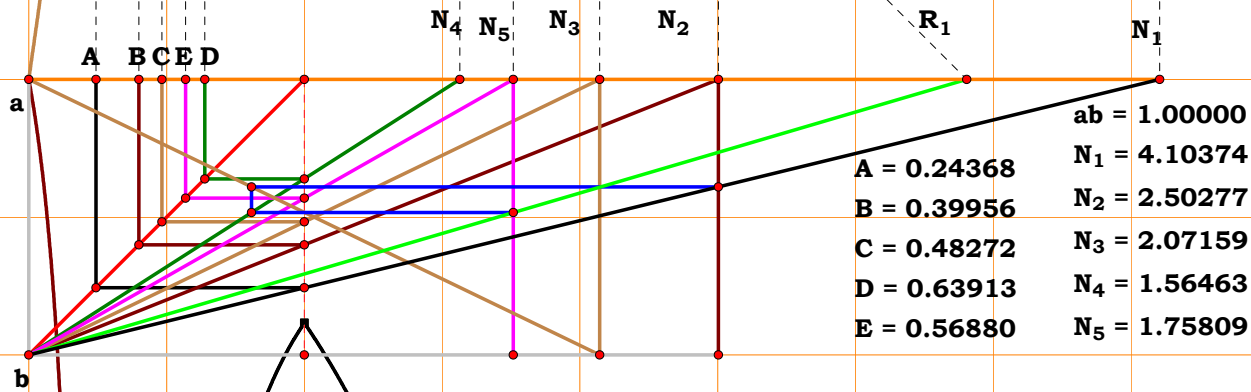
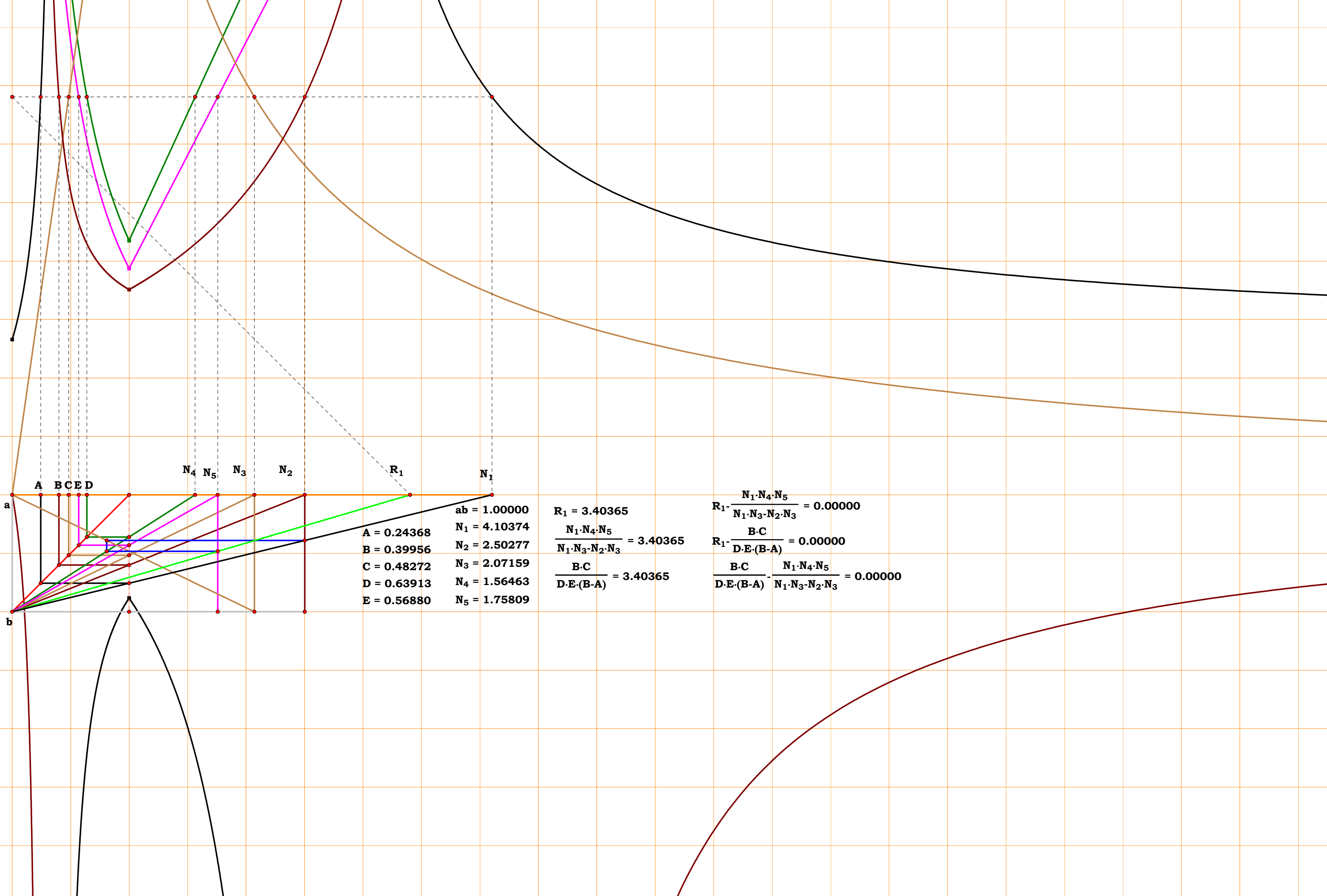
$ab = 1.00000$   
 $A = 0.24368$      $N_1 = 4.10374$   
 $B = 0.39956$      $N_2 = 2.50277$   
 $C = 0.48272$      $N_3 = 2.07159$   
 $D = 0.63913$      $N_4 = 1.56463$   
 $E = 0.56880$      $N_5 = 1.75809$

$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_3 - N_2 \cdot N_3} = 0.00000$

$R_1 - \frac{B \cdot C}{D \cdot E \cdot (B - A)} = 0.00000$

$\frac{B \cdot C}{D \cdot E \cdot (B - A)} - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_3 - N_2 \cdot N_3} = 0.00000$

$R_1 = 3.40365$   
 $\frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_3 - N_2 \cdot N_3} = 3.40365$   
 $\frac{B \cdot C}{D \cdot E \cdot (B - A)} = 3.40365$



**A = 0.24368**  
**B = 0.39956**  
**C = 0.48272**  
**D = 0.63913**  
**E = 0.56880**

**N<sub>1</sub> = 4.10374**  
**N<sub>2</sub> = 2.50277**  
**N<sub>3</sub> = 2.07159**  
**N<sub>4</sub> = 1.56463**  
**N<sub>5</sub> = 1.75809**

**R<sub>1</sub> = 3.40365**

$$\frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_3 - N_2 \cdot N_3} = 3.40365$$
$$\frac{B \cdot C}{D \cdot E \cdot (B - A)} = 3.40365$$

$$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_3 - N_2 \cdot N_3} = 0.00000$$
$$R_1 - \frac{B \cdot C}{D \cdot E \cdot (B - A)} = 0.00000$$
$$\frac{B \cdot C}{D \cdot E \cdot (B - A)} - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_3 - N_2 \cdot N_3} = 0.00000$$



1CST4R4

Given.

Unit.  $ab := 1$      $N_1 := 3.31092$

$N_2 := 1.56656$      $N_3 := 4.53608$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$

Descriptions.

$cd := \frac{N_3}{N_1 + N_3}$      $R_1 := \frac{N_2}{cd}$

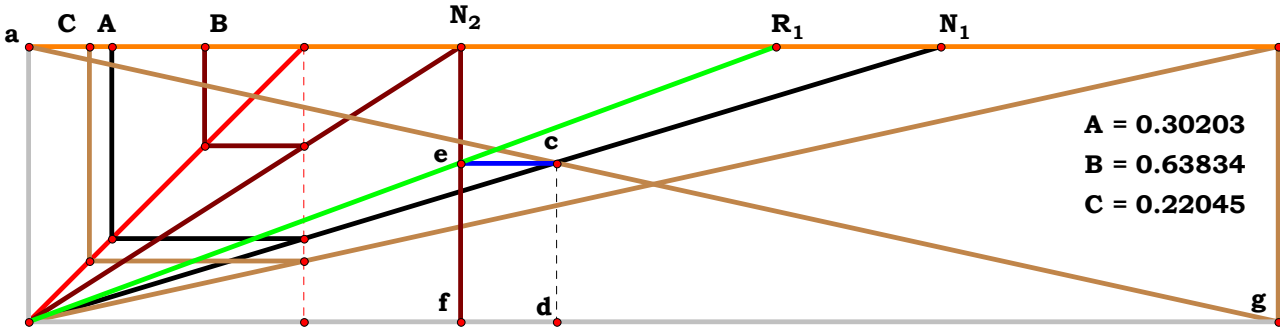
$R_1 = 2.710004$

Definitions.

$R_1 - \frac{N_2 \cdot (N_1 + N_3)}{N_3} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$      $N_3 - \frac{1}{C} = 0$

$R_1 - \frac{(A + C)}{A \cdot B} = 0$



$A = 0.30203$   
 $B = 0.63834$   
 $C = 0.22045$

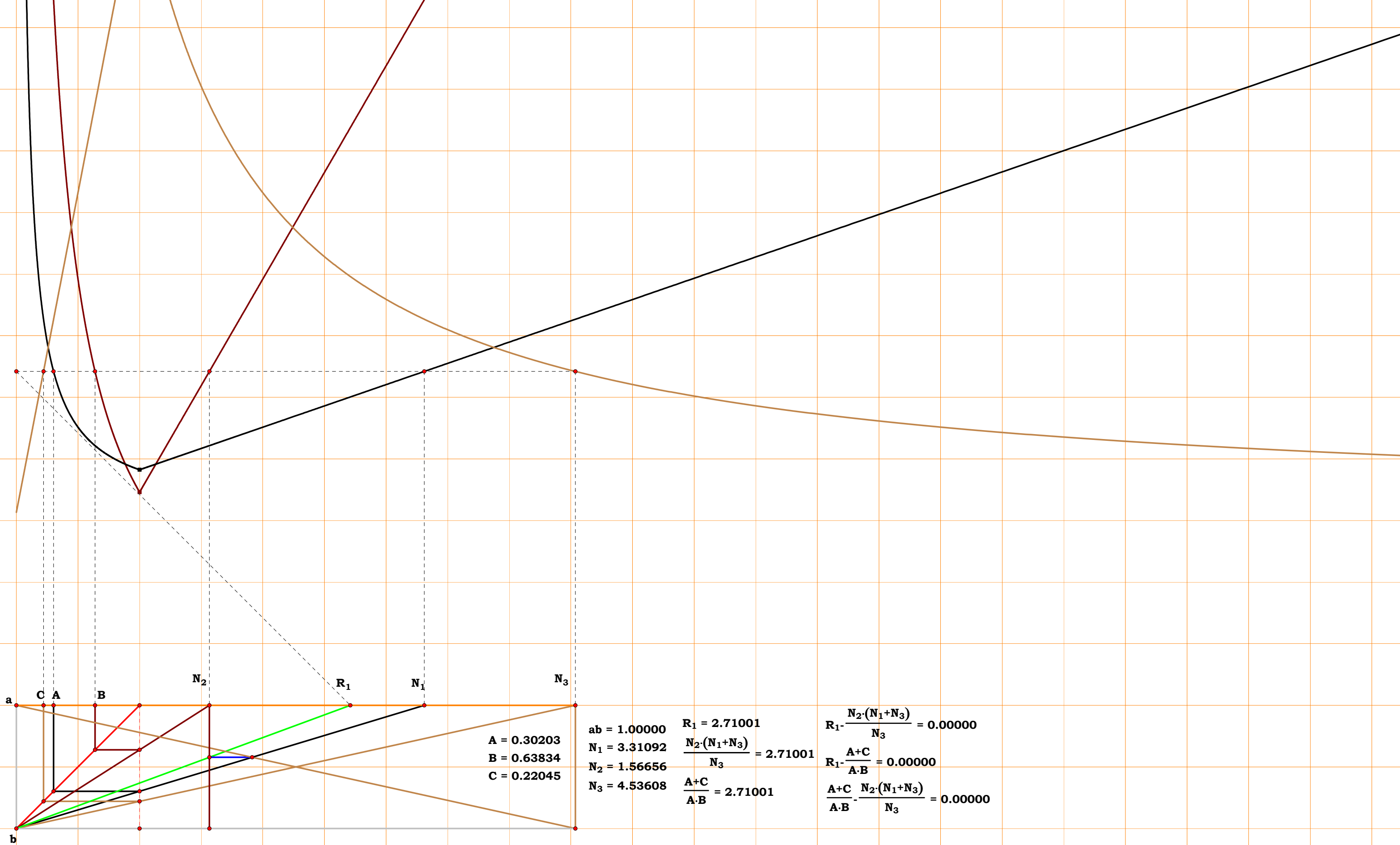
$ab = 1.00000$   
 $N_1 = 3.31092$   
 $N_2 = 1.56656$   
 $N_3 = 4.53608$

$R_1 = 2.71001$   
 $\frac{N_2 \cdot (N_1 + N_3)}{N_3} = 2.71001$   
 $\frac{A + C}{A \cdot B} = 2.71001$

$R_1 - \frac{N_2 \cdot (N_1 + N_3)}{N_3} = 0.00000$

$R_1 - \frac{A + C}{A \cdot B} = 0.00000$

$\frac{A + C}{A \cdot B} - \frac{N_2 \cdot (N_1 + N_3)}{N_3} = 0.00000$





1CST4R5

Given.

Unit.  $ab := 1$       $N_1 := 4.39209$   
 $N_2 := 3.35517$       $N_3 := 2.18899$   
 $N_4 := 1.65230$       $N_5 := 2.57170$

$A := \frac{1}{N_1}$     $B := \frac{1}{N_2}$     $C := \frac{1}{N_3}$     $D := \frac{1}{N_4}$     $E := \frac{1}{N_5}$

Descriptions.

$cd := 1 - \frac{N_2}{N_1}$       $ac := N_3 \cdot cd$

$ce := \frac{N_4 - ac}{N_4}$       $R_1 := \frac{N_5}{ce}$

$R_1 = 3.742139$

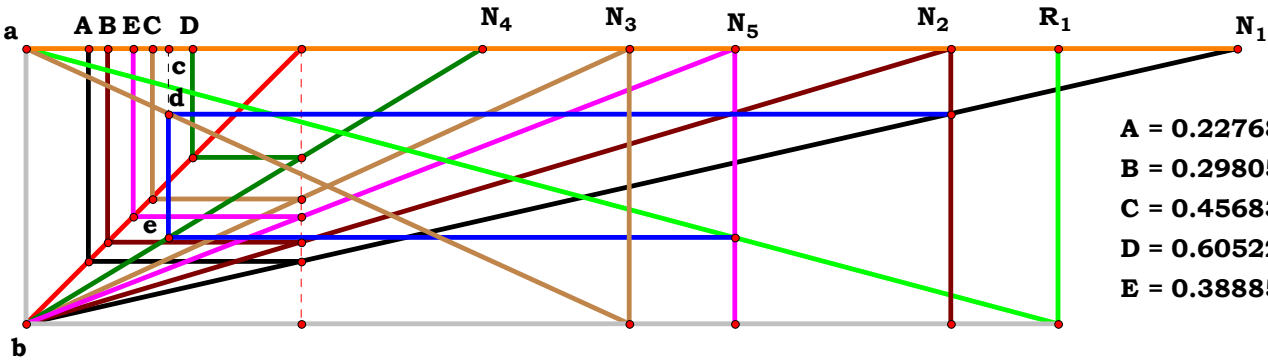
Definitions.

$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 - N_3 \cdot (N_1 - N_2)} = 0$

$N_1 - \frac{1}{A} = 0$       $N_2 - \frac{1}{B} = 0$

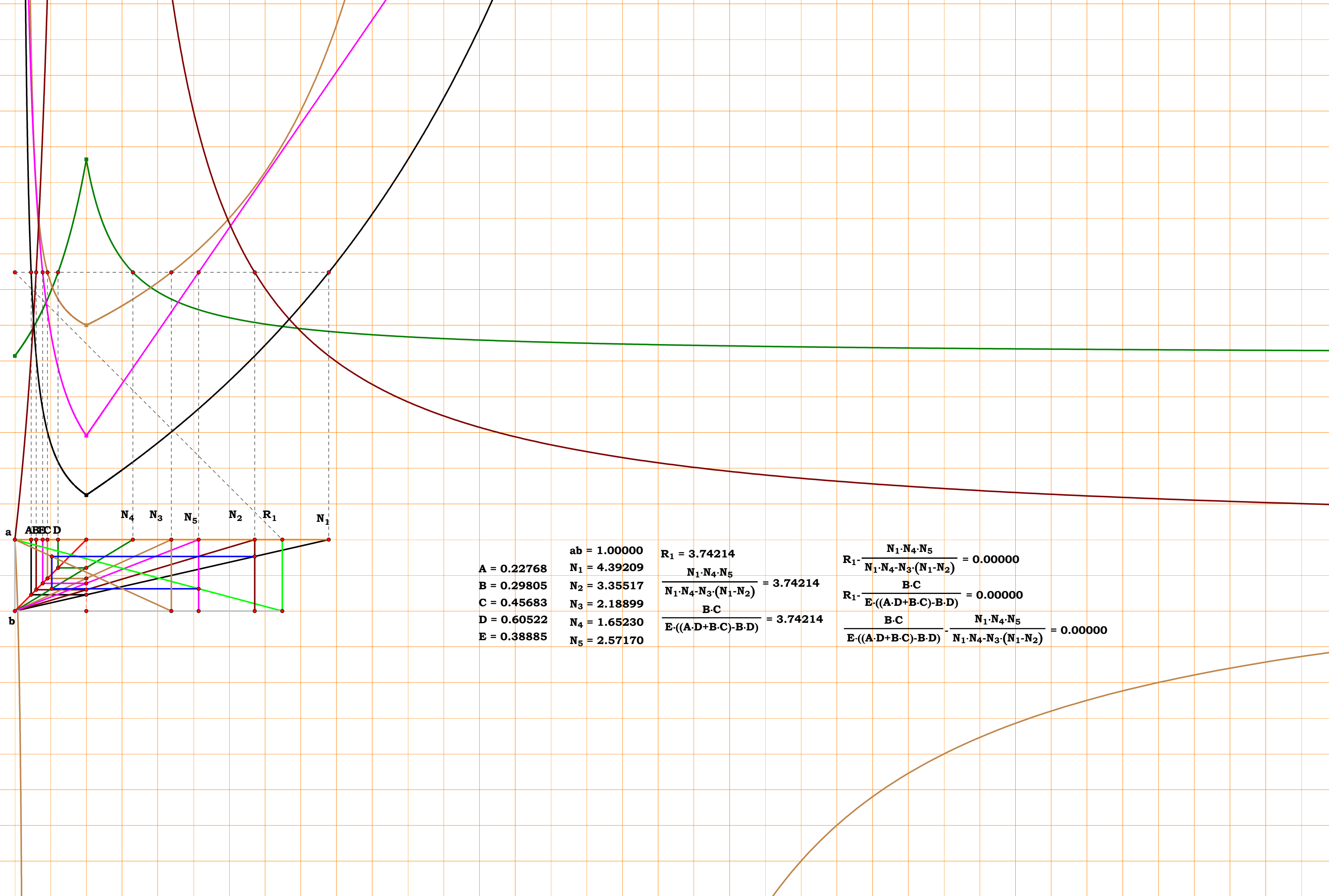
$N_3 - \frac{1}{C} = 0$       $N_4 - \frac{1}{D} = 0$       $N_5 - \frac{1}{E} = 0$

$R_1 - \frac{B \cdot C}{E \cdot (A \cdot D + B \cdot C - B \cdot D)} = 0$



$ab = 1.00000$       $N_1 = 4.39209$       $R_1 = 3.74214$   
 $A = 0.22768$       $N_2 = 3.35517$       $\frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 - N_3 \cdot (N_1 - N_2)} = 3.74214$   
 $B = 0.29805$       $N_3 = 2.18899$       $\frac{B \cdot C}{E \cdot (A \cdot D + B \cdot C - B \cdot D)} = 3.74214$   
 $C = 0.45683$       $N_4 = 1.65230$   
 $D = 0.60522$       $N_5 = 2.57170$   
 $E = 0.38885$

$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 - N_3 \cdot (N_1 - N_2)} = 0.00000$   
 $R_1 - \frac{B \cdot C}{E \cdot (A \cdot D + B \cdot C - B \cdot D)} = 0.00000$   
 $\frac{B \cdot C}{E \cdot (A \cdot D + B \cdot C - B \cdot D)} - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 - N_3 \cdot (N_1 - N_2)} = 0.00000$



$A = 0.22768$	$ab = 1.00000$	$R_1 = 3.74214$	$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 \cdot N_3 \cdot (N_1 - N_2)} = 0.00000$
$B = 0.29805$	$N_1 = 4.39209$	$\frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 \cdot N_3 \cdot (N_1 - N_2)} = 3.74214$	$R_1 - \frac{B \cdot C}{E \cdot ((A \cdot D + B \cdot C) - B \cdot D)} = 0.00000$
$C = 0.45683$	$N_2 = 3.35517$	$\frac{B \cdot C}{E \cdot ((A \cdot D + B \cdot C) - B \cdot D)} = 3.74214$	$\frac{B \cdot C}{E \cdot ((A \cdot D + B \cdot C) - B \cdot D)} - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 \cdot N_3 \cdot (N_1 - N_2)} = 0.00000$
$D = 0.60522$	$N_3 = 2.18899$		
$E = 0.38885$	$N_4 = 1.65230$		
	$N_5 = 2.57170$		



**Unit.  $\mathbf{ab} := 1$      $\mathbf{N_1} := 4.43356$**

$$\mathbf{N}_2 := 2.11714 \quad \mathbf{N}_3 := 2.57080$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3}$$

### Descriptions.

$$\mathbf{cd} := \frac{N_1}{N_1 + N_3} \quad \mathbf{R}_1 := \frac{N_2}{\mathbf{cd}}$$

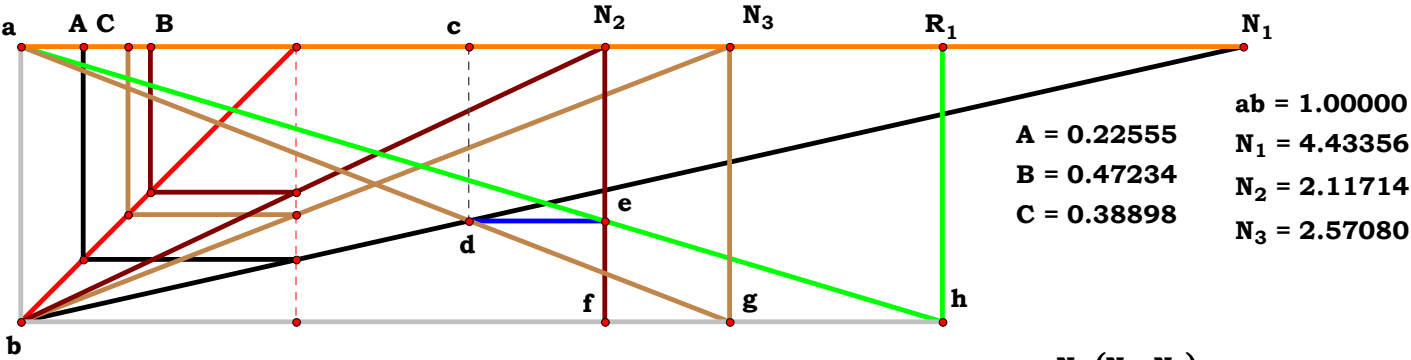
$$\mathbf{R}_1 = 3.344764$$

## Definitions.

$$\mathbf{R}_1 - \frac{\mathbf{N}_2 \cdot (\mathbf{N}_1 + \mathbf{N}_3)}{\mathbf{N}_1} = \mathbf{0}$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$\mathbf{R}_1 - \frac{(\mathbf{A} + \mathbf{C})}{\mathbf{B} \cdot \mathbf{C}} = \mathbf{0}$$



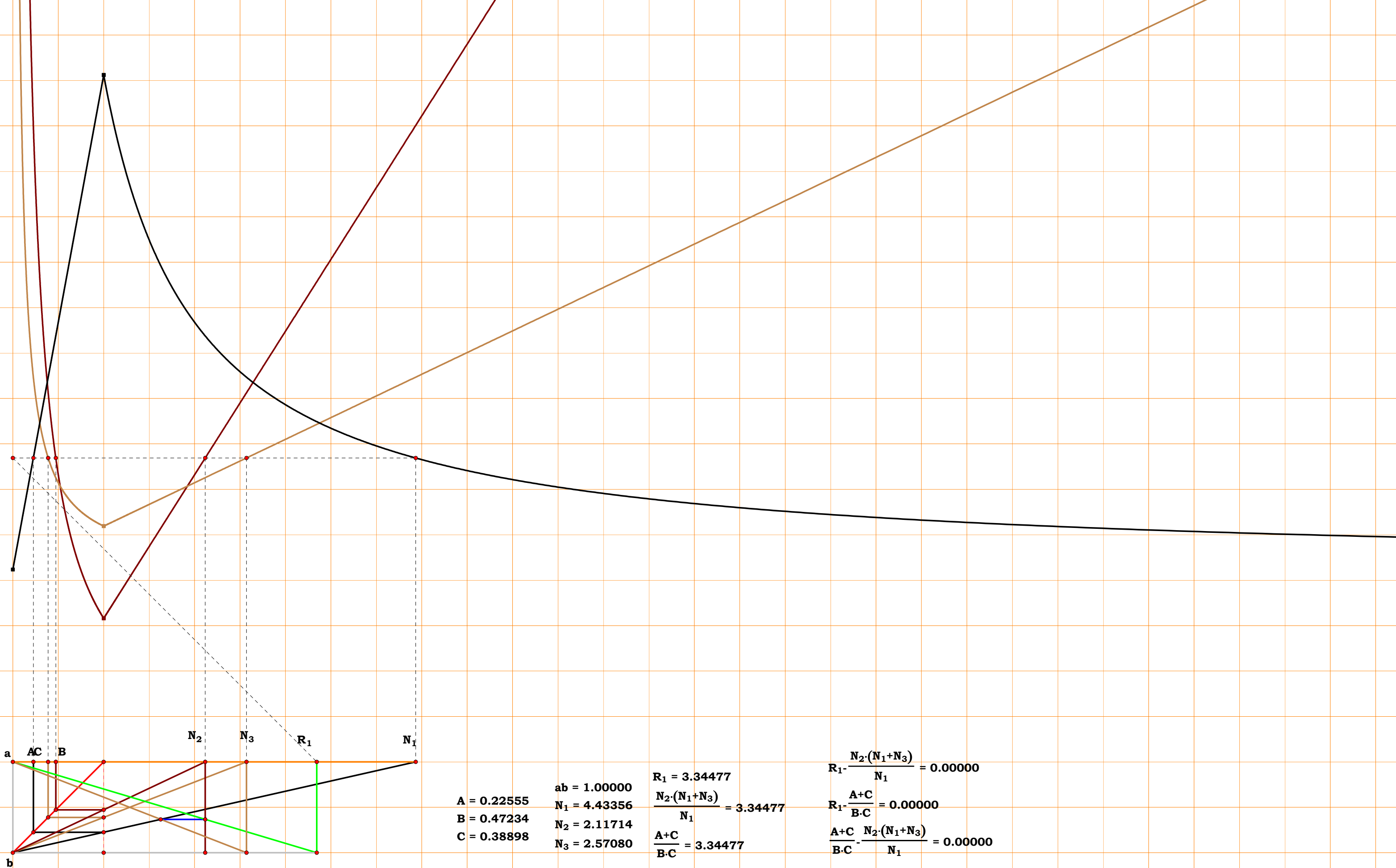
<b>A = 0.22555</b>	<b>ab = 1.00000</b>
<b>B = 0.47234</b>	<b>N<sub>1</sub> = 4.43356</b>
<b>C = 0.38898</b>	<b>N<sub>2</sub> = 2.11714</b>
	<b>N<sub>3</sub> = 2.57080</b>

$$R_1 - \frac{N_2 \cdot (N_1 + N_3)}{N_1} = 0.00000$$

$$R_1 - \frac{A+C}{B.C} = 0.00000$$

$$\frac{A+C}{B \cdot C} - \frac{N_2 \cdot (N_1 + N_3)}{N_1} = 0.00000$$

$$\begin{aligned} R_1 &= 3.34477 \\ \frac{N_2 \cdot (N_1 + N_3)}{N_1} &= 3.34477 \\ \frac{A+C}{B \cdot C} &= 3.34477 \end{aligned}$$







1CST5R0

Given.

Unit.  $ab := 1$     $N_1 := 1.91252$     $N_2 := 3.75256$

$N_3 := 2.36821$     $N_4 := 2.82328$     $N_5 := 1.68340$

$A := \frac{1}{N_1}$     $B := \frac{1}{N_2}$     $C := \frac{1}{N_3}$     $D := \frac{1}{N_4}$     $E := \frac{1}{N_5}$

Descriptions.

$bj := \frac{N_1 \cdot N_2}{N_1 + N_2}$     $hj := \frac{bj}{N_1}$

$bg := N_3 \cdot hj$     $fg := \frac{bg}{N_4}$

$bd := N_5 \cdot fg$     $R_1 := \frac{bd}{1 - fg}$

$R_1 = 2.104908$     $R_2 := \frac{1}{R_1}$

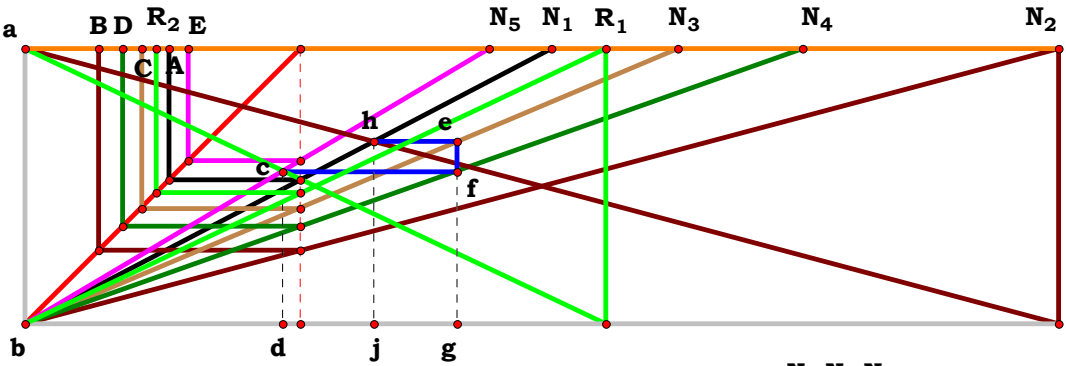
Definitions.

$R_1 - \frac{N_2 \cdot N_3 \cdot N_5}{N_1 \cdot N_4 - N_2 \cdot (N_3 - N_4)} = 0$

$N_1 - \frac{1}{A} = 0$     $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$     $N_4 - \frac{1}{D} = 0$     $N_5 - \frac{1}{E} = 0$

$R_1 - \frac{A \cdot D}{E \cdot (A \cdot C - A \cdot D + B \cdot C)} = 0$     $R_2 - \frac{E \cdot (A \cdot C - A \cdot D + B \cdot C)}{A \cdot D} = 0$



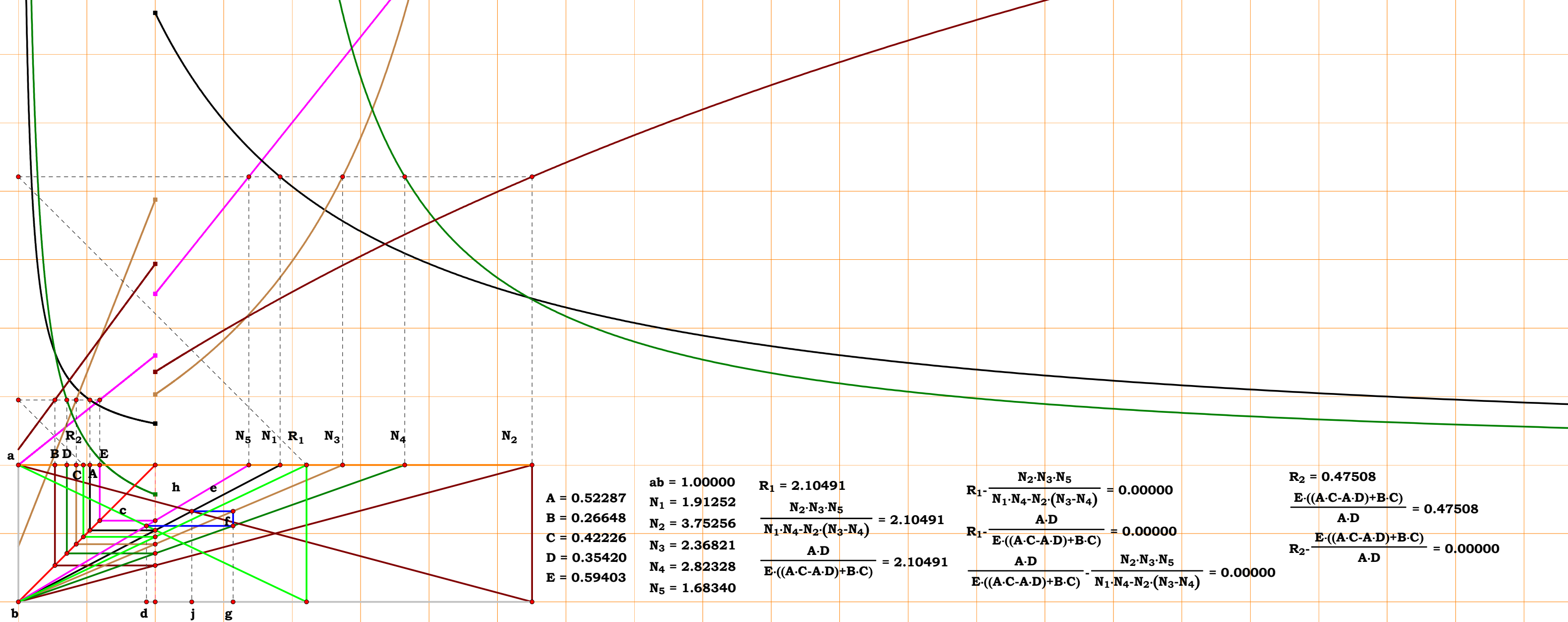
$A = 0.52287$   
 $B = 0.26648$   
 $C = 0.42226$   
 $D = 0.35420$   
 $E = 0.59403$

$ab = 1.00000$   
 $N_1 = 1.91252$   
 $N_2 = 3.75256$   
 $N_3 = 2.36821$   
 $N_4 = 2.82328$   
 $N_5 = 1.68340$

$R_1 = 2.10491$   
 $\frac{N_2 \cdot N_3 \cdot N_5}{N_1 \cdot N_4 - N_2 \cdot (N_3 - N_4)} = 2.10491$   
 $\frac{A \cdot D}{E \cdot (A \cdot C - A \cdot D + B \cdot C)} = 2.10491$

$R_1 - \frac{N_2 \cdot N_3 \cdot N_5}{N_1 \cdot N_4 - N_2 \cdot (N_3 - N_4)} = 0.00000$   
 $R_1 - \frac{A \cdot D}{E \cdot (A \cdot C - A \cdot D + B \cdot C)} = 0.00000$   
 $\frac{A \cdot D}{E \cdot (A \cdot C - A \cdot D + B \cdot C)} - \frac{N_2 \cdot N_3 \cdot N_5}{N_1 \cdot N_4 - N_2 \cdot (N_3 - N_4)} = 0.00000$

$R_2 = 0.47508$   
 $\frac{E \cdot (A \cdot C - A \cdot D + B \cdot C)}{A \cdot D} = 0.47508$   
 $R_2 - \frac{E \cdot (A \cdot C - A \cdot D + B \cdot C)}{A \cdot D} = 0.00000$



**A = 0.52287**  
**B = 0.26648**  
**C = 0.42226**  
**D = 0.35420**  
**E = 0.59403**

**ab = 1.00000**  
**N<sub>1</sub> = 1.91252**  
**N<sub>2</sub> = 3.75256**  
**N<sub>3</sub> = 2.36821**  
**N<sub>4</sub> = 2.82328**  
**N<sub>5</sub> = 1.68340**

$$R_1 = 2.10491$$

$$\frac{N_2 \cdot N_3 \cdot N_5}{N_1 \cdot N_4 - N_2 \cdot (N_3 - N_4)} = 2.10491$$

$$\frac{A \cdot D}{E \cdot ((A \cdot C - A \cdot D) + B \cdot C)} = 2.10491$$

$$R_1 - \frac{N_2 \cdot N_3 \cdot N_5}{N_1 \cdot N_4 - N_2 \cdot (N_3 - N_4)} = 0.00000$$

$$R_1 - \frac{A \cdot D}{E \cdot ((A \cdot C - A \cdot D) + B \cdot C)} = 0.00000$$

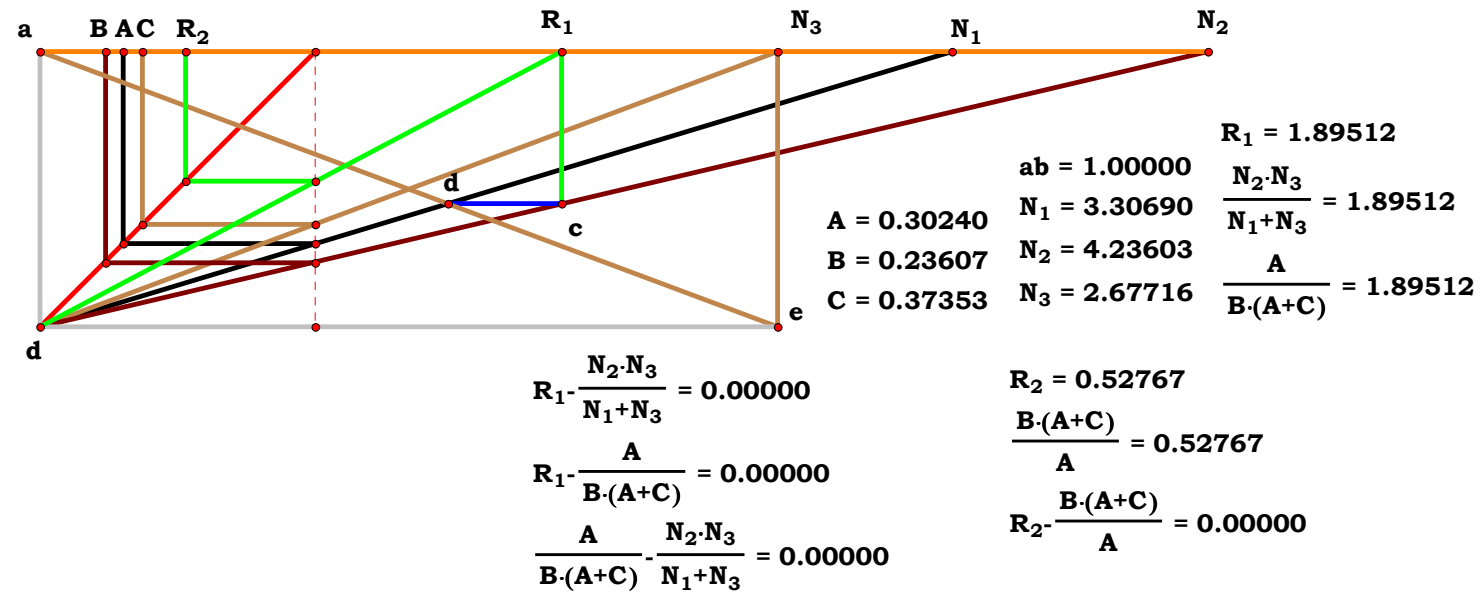
$$\frac{A \cdot D}{E \cdot ((A \cdot C - A \cdot D) + B \cdot C)} - \frac{N_2 \cdot N_3 \cdot N_5}{N_1 \cdot N_4 - N_2 \cdot (N_3 - N_4)} = 0.00000$$

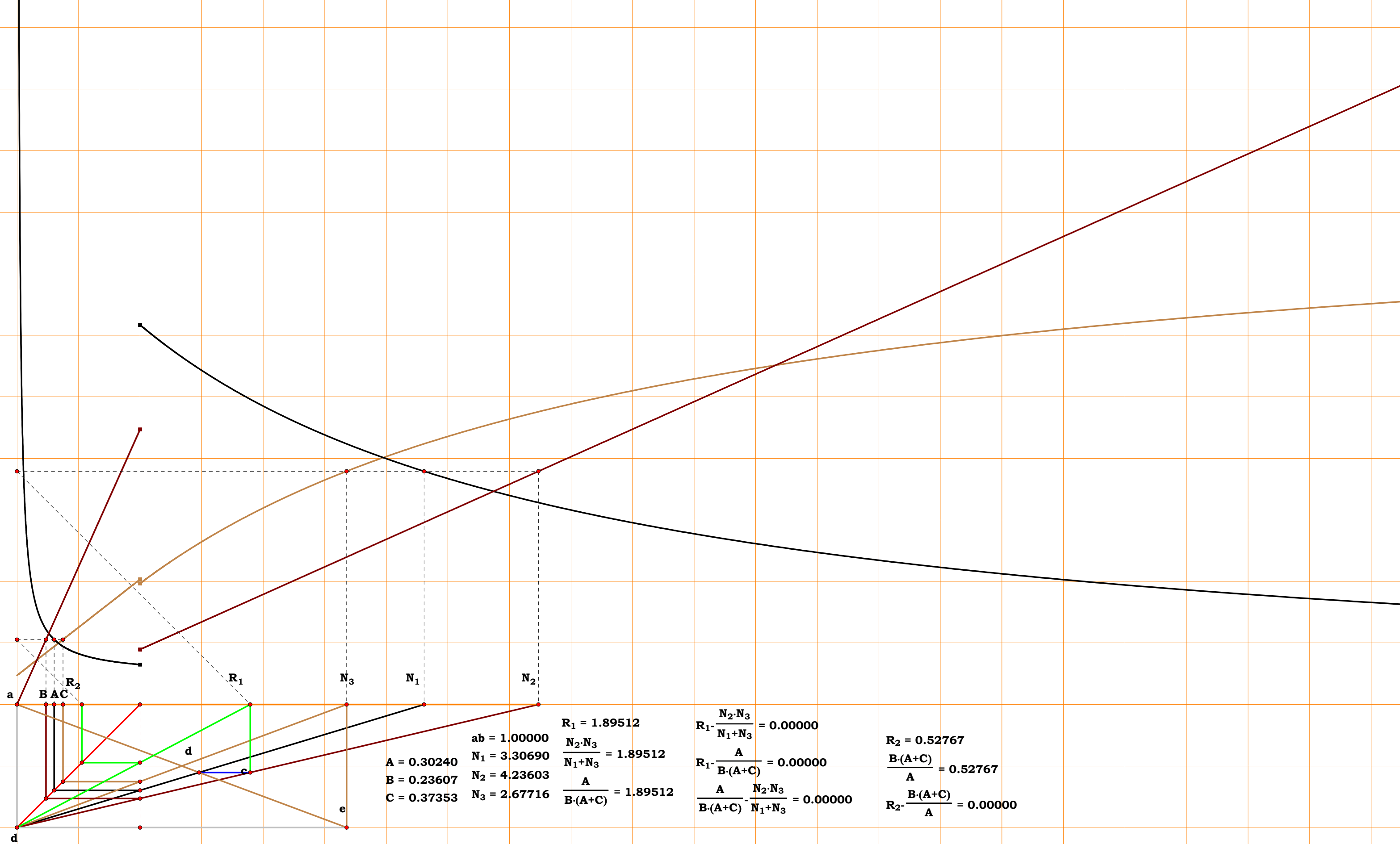
$$R_2 = 0.47508$$

$$\frac{E \cdot ((A \cdot C - A \cdot D) + B \cdot C)}{A \cdot D} = 0.47508$$

$$R_2 - \frac{E \cdot ((A \cdot C - A \cdot D) + B \cdot C)}{A \cdot D} = 0.00000$$

**1CST5R1**

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3}$$
$$\mathbf{R}_1 = 1.895123 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$
$$R_1 - \frac{A}{B \cdot (A + C)} = 0 \quad R_2 - \frac{B \cdot (A + C)}{A} = 0$$






1CST5R2

Given.

Unit.  $ab := 1$      $N_1 := 2.02461$

$N_2 := 1.59672$      $N_3 := 2.26723$

$N_4 := 2.87365$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$      $D := \frac{1}{N_4}$

Descriptions.

$bg := \frac{N_1 \cdot N_3}{N_1 + N_3}$      $fg := \frac{bg}{N_1}$

$be := N_2 \cdot fg$      $ce := \frac{N_4 - be}{N_4}$      $R_1 := \frac{be}{ce}$

$R_1 = 1.193946$      $R_2 := \frac{1}{R_1}$

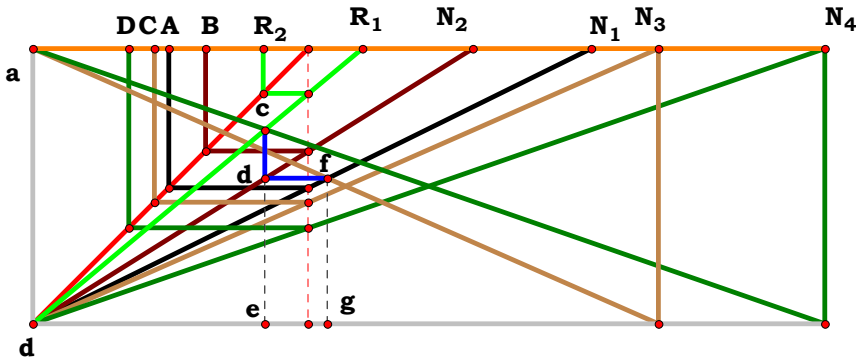
Definitions.

$R_1 - \frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_3 \cdot (N_2 - N_4)} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$      $N_4 - \frac{1}{D} = 0$

$R_1 - \frac{A}{A \cdot B - A \cdot D + B \cdot C} = 0$      $R_2 - \frac{A \cdot B - A \cdot D + B \cdot C}{A} = 0$



$A = 0.49392$   
 $B = 0.62629$   
 $C = 0.44107$   
 $D = 0.34799$

$ac = 1.00000$   
 $N_1 = 2.02461$   
 $N_2 = 1.59672$   
 $N_3 = 2.26723$   
 $N_4 = 2.87365$

$R_1 = 1.19394$   
 $\frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_3 \cdot (N_2 - N_4)} = 1.19394$   
 $\frac{A}{(A \cdot B - A \cdot D) + B \cdot C} = 1.19394$

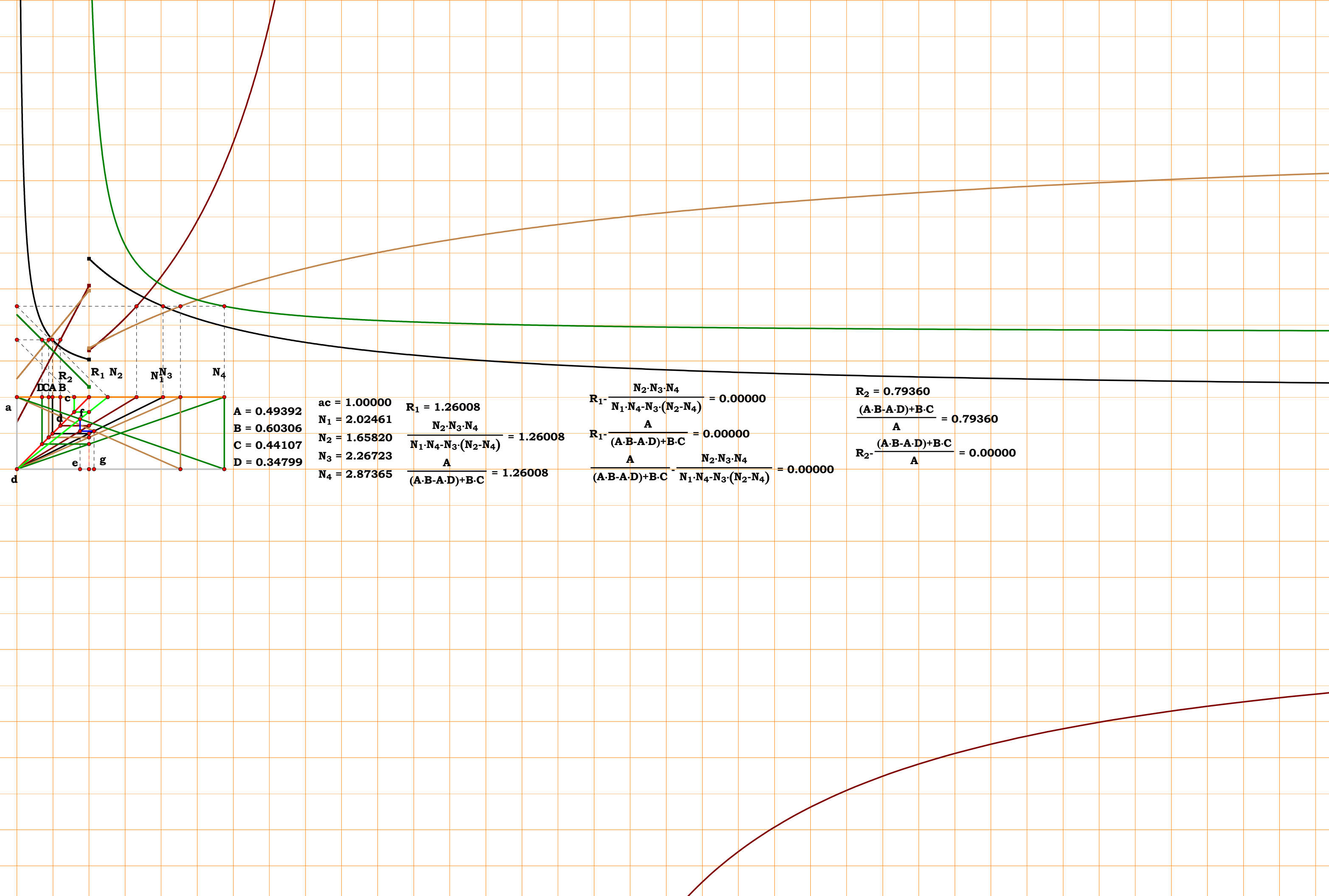
$R_1 - \frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_3 \cdot (N_2 - N_4)} = 0.00000$

$R_1 - \frac{A}{(A \cdot B - A \cdot D) + B \cdot C} = 0.00000$

$\frac{A}{(A \cdot B - A \cdot D) + B \cdot C} - \frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_3 \cdot (N_2 - N_4)} = 0.00000$

$R_2 = 0.83756$   
 $\frac{(A \cdot B - A \cdot D) + B \cdot C}{A} = 0.83756$

$R_2 - \frac{(A \cdot B - A \cdot D) + B \cdot C}{A} = 0.00000$



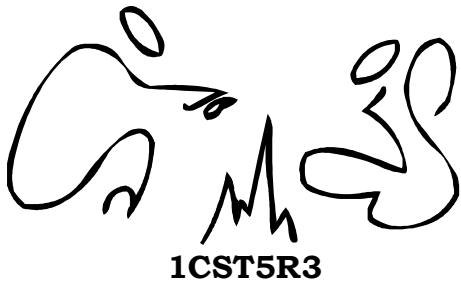
**A = 0.49392**  
**B = 0.60306**  
**C = 0.44107**  
**D = 0.34799**

**ac = 1.00000**  
**N<sub>1</sub> = 2.02461**  
**N<sub>2</sub> = 1.65820**  
**N<sub>3</sub> = 2.26723**  
**N<sub>4</sub> = 2.87365**

**R<sub>1</sub> = 1.26008**  
$$\frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_3 \cdot (N_2 - N_4)} = 1.26008$$
$$\frac{N_2 \cdot N_3 \cdot N_4}{A} = 1.26008$$
$$\frac{N_2 \cdot N_3 \cdot N_4}{(A \cdot B - A \cdot D) + B \cdot C} = 1.26008$$

$$R_1 - \frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_3 \cdot (N_2 - N_4)} = 0.00000$$
$$R_1 - \frac{A}{(A \cdot B - A \cdot D) + B \cdot C} = 0.00000$$
$$\frac{A}{(A \cdot B - A \cdot D) + B \cdot C} - \frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_3 \cdot (N_2 - N_4)} = 0.00000$$

**R<sub>2</sub> = 0.79360**  
$$\frac{(A \cdot B - A \cdot D) + B \cdot C}{A} = 0.79360$$
$$R_2 - \frac{(A \cdot B - A \cdot D) + B \cdot C}{A} = 0.00000$$



Given.

Unit.  $ab := 1$      $N_1 := 3.42697$

$N_2 := 1.94540$      $N_3 := 1.53815$      $N_4 := 4.54576$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$      $D := \frac{1}{N_4}$

Descriptions.

$ac := \frac{N_1 \cdot N_3}{N_1 + N_3}$        $cd := 1 - \frac{ac}{N_2}$

$R1N_4 := N_4 \cdot cd$      $R_1 := N_4 - R1N_4$

$R_1 = 2.480715$      $R_2 := \frac{1}{R_1}$

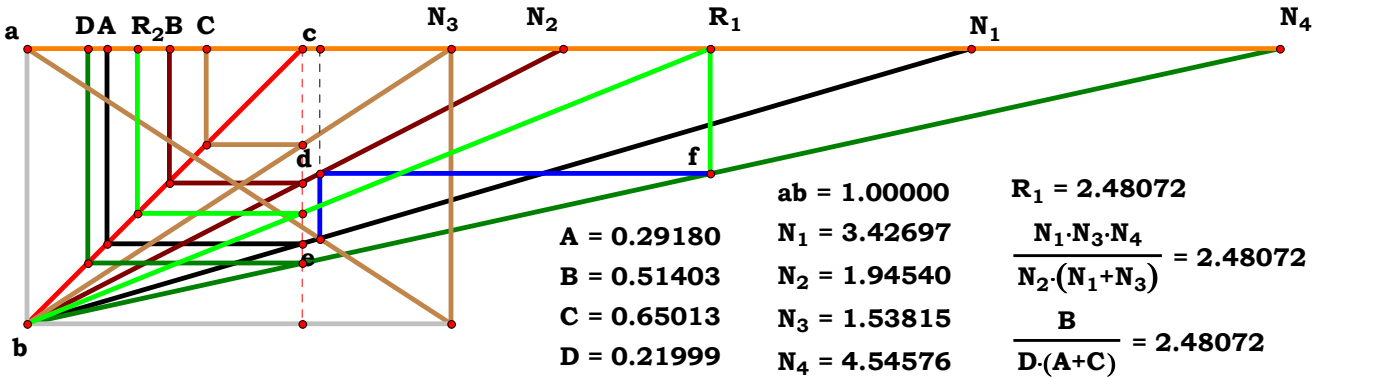
Definitions.

$R_1 - \frac{N_1 \cdot N_3 \cdot N_4}{N_2 \cdot (N_1 + N_3)} = 0$

$N_1 - \frac{1}{A} = 0$        $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$        $N_4 - \frac{1}{D} = 0$

$R_1 - \frac{B}{D \cdot (A + C)} = 0$      $R_2 - \frac{D \cdot (A + C)}{B} = 0$



$R_1 - \frac{N_1 \cdot N_3 \cdot N_4}{N_2 \cdot (N_1 + N_3)} = 0.00000$

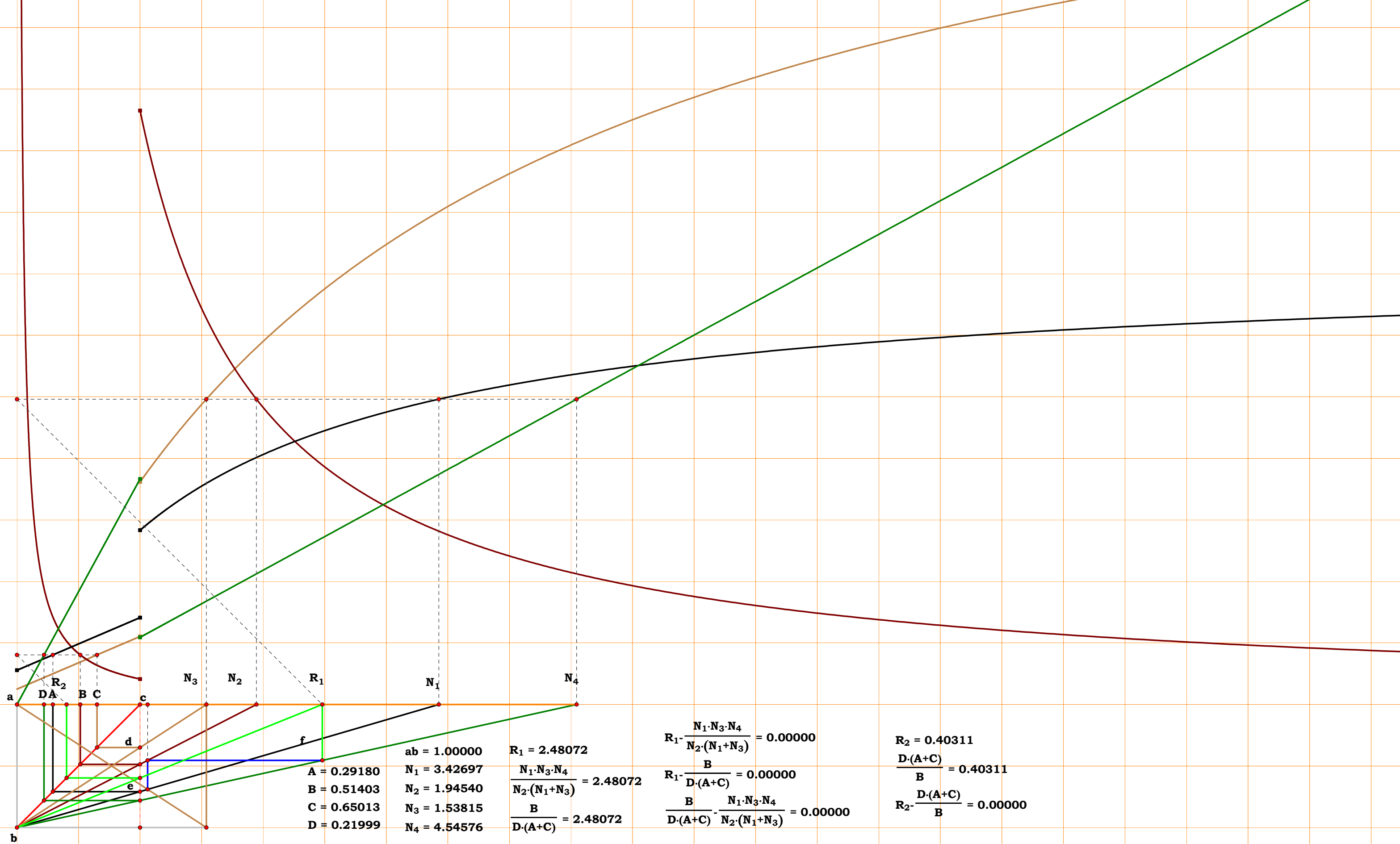
$R_1 - \frac{B}{D \cdot (A + C)} = 0.00000$

$\frac{B}{D \cdot (A + C)} - \frac{N_1 \cdot N_3 \cdot N_4}{N_2 \cdot (N_1 + N_3)} = 0.00000$

$R_2 = 0.40311$

$\frac{D \cdot (A + C)}{B} = 0.40311$

$R_2 - \frac{D \cdot (A + C)}{B} = 0.00000$







1CST5R4

Given.

Unit.  $ab := 1$   $N_1 := 2.58090$

$N_2 := 2.20853$

$N_3 := 5.16448$   $N_4 := 2.99428$

$N_5 := 1.83578$   $N_6 := 3.58898$

$A := \frac{1}{N_1}$   $B := \frac{1}{N_2}$   $C := \frac{1}{N_3}$

$D := \frac{1}{N_4}$   $E := \frac{1}{N_5}$   $F := \frac{1}{N_6}$

Descriptions.

$bk := \frac{N_1 \cdot N_3}{N_1 + N_3}$   $jk := 1 - \frac{N_1 - bk}{N_1}$   $bh := N_2 \cdot jk$

$cd := 1 - \frac{N_4 - bh}{N_4}$   $bd := N_5 \cdot cd$   $bg := \frac{bd}{1 - cd}$

$bf := \frac{bg \cdot N_6}{bg + N_6}$   $ef := \frac{bf}{N_6}$   $R_1 := \frac{bh}{ef}$

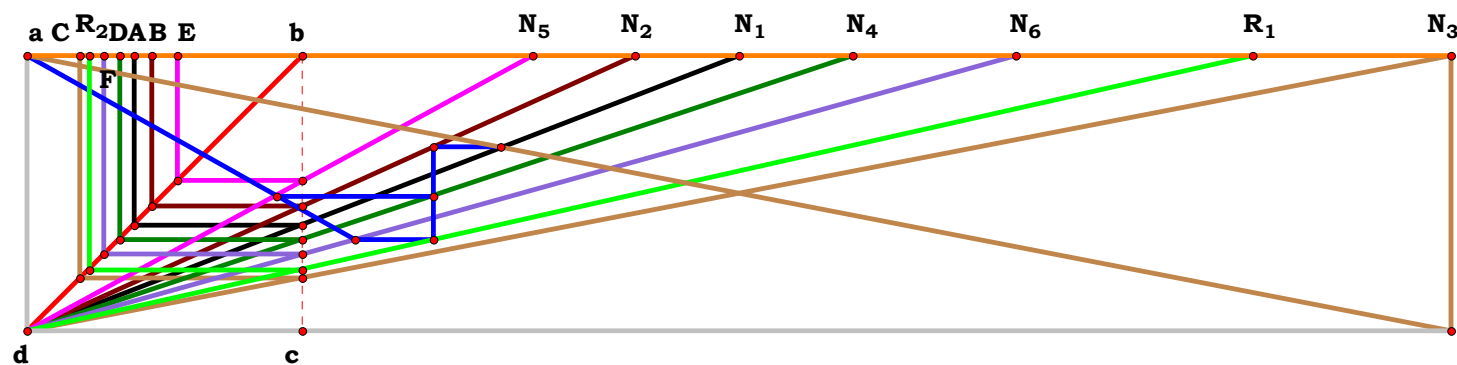
$R_1 = 4.447502$   $R_2 := \frac{1}{R_1}$

Definitions.

$R_1 - \frac{N_2 \cdot N_3 \cdot N_5 + N_6 \cdot (N_1 \cdot N_4 - N_2 \cdot N_3 + N_3 \cdot N_4)}{N_5 \cdot (N_1 + N_3)} = 0$

$N_1 - \frac{1}{A} = 0$   $N_2 - \frac{1}{B} = 0$   $N_3 - \frac{1}{C} = 0$   $N_4 - \frac{1}{D} = 0$   $N_5 - \frac{1}{E} = 0$   $N_6 - \frac{1}{F} = 0$

$R_1 - \frac{[B \cdot E \cdot (A + C) - A \cdot D \cdot (E - F)]}{B \cdot D \cdot F \cdot (A + C)} = 0$   $R_2 - \frac{B \cdot D \cdot F \cdot (A + C)}{[B \cdot E \cdot (A + C) - A \cdot D \cdot (E - F)]} = 0$



$R_1 = 4.44750$

$\frac{N_2 \cdot N_3 \cdot N_5 + N_6 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_5 \cdot (N_1 + N_3)} = 4.44750$

$\frac{B \cdot E \cdot (A + C) - A \cdot D \cdot (E - F)}{B \cdot D \cdot F \cdot (A + C)} = 4.44750$

$R_1 - \frac{N_2 \cdot N_3 \cdot N_5 + N_6 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_5 \cdot (N_1 + N_3)} = 0.00000$

$R_1 - \frac{B \cdot E \cdot (A + C) - A \cdot D \cdot (E - F)}{B \cdot D \cdot F \cdot (A + C)} = 0.00000$

$\frac{B \cdot E \cdot (A + C) - A \cdot D \cdot (E - F)}{B \cdot D \cdot F \cdot (A + C)} - \frac{N_2 \cdot N_3 \cdot N_5 + N_6 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_5 \cdot (N_1 + N_3)} = 0.00000$

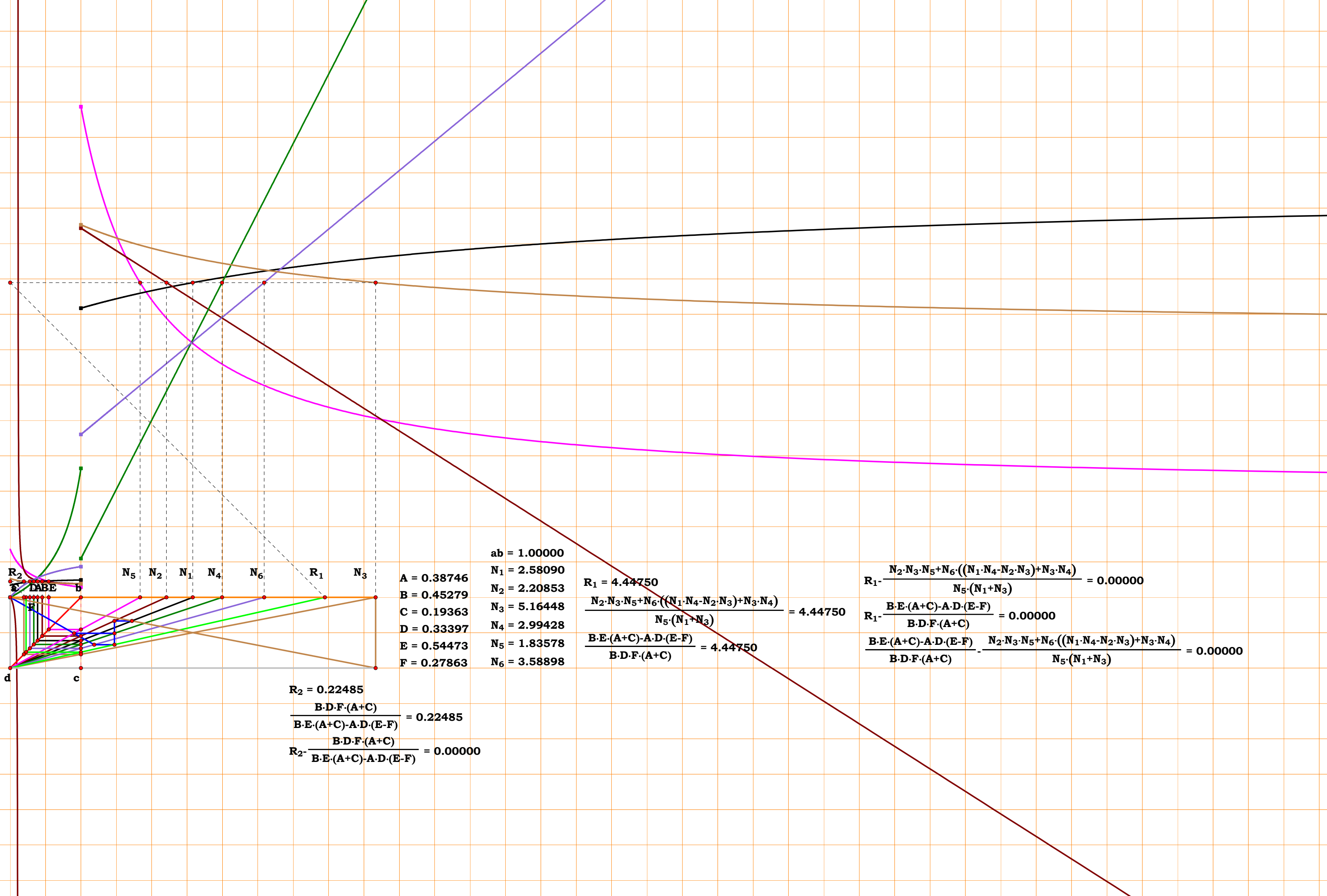
$A = 0.38746$   
 $B = 0.45279$   
 $C = 0.19363$   
 $D = 0.33397$   
 $E = 0.54473$   
 $F = 0.27863$

$ab = 1.00000$   
 $N_1 = 2.58090$   
 $N_2 = 2.20853$   
 $N_3 = 5.16448$   
 $N_4 = 2.99428$   
 $N_5 = 1.83578$   
 $N_6 = 3.58898$

$R_2 = 0.22485$

$\frac{B \cdot D \cdot F \cdot (A + C)}{B \cdot E \cdot (A + C) - A \cdot D \cdot (E - F)} = 0.22485$

$R_2 - \frac{B \cdot D \cdot F \cdot (A + C)}{B \cdot E \cdot (A + C) - A \cdot D \cdot (E - F)} = 0.00000$



$R_2$   
 $L$   
 $A$   
 $B$   
 $E$   
 $F$   
 $c$   
 $d$   
 $N_5$   
 $N_2$   
 $N_1$   
 $N_4$   
 $N_6$   
 $R_1$   
 $N_3$

$ab = 1.00000$   
 $N_1 = 2.58090$   
 $N_2 = 2.20853$   
 $N_3 = 5.16448$   
 $N_4 = 2.99428$   
 $N_5 = 1.83578$   
 $N_6 = 3.58898$   
 $A = 0.38746$   
 $B = 0.45279$   
 $C = 0.19363$   
 $D = 0.33397$   
 $E = 0.54473$   
 $F = 0.27863$

$$R_2 = 0.22485$$
$$\frac{B \cdot D \cdot F \cdot (A+C)}{B \cdot E \cdot (A+C) - A \cdot D \cdot (E-F)} = 0.22485$$
$$R_2 - \frac{B \cdot D \cdot F \cdot (A+C)}{B \cdot E \cdot (A+C) - A \cdot D \cdot (E-F)} = 0.00000$$

$$R_1 = 4.44750$$
$$\frac{N_2 \cdot N_3 \cdot N_5 + N_6 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_5 \cdot (N_1 + N_3)} = 4.44750$$
$$\frac{B \cdot E \cdot (A+C) - A \cdot D \cdot (E-F)}{B \cdot D \cdot F \cdot (A+C)} = 4.44750$$

$$R_1 - \frac{N_2 \cdot N_3 \cdot N_5 + N_6 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_5 \cdot (N_1 + N_3)} = 0.00000$$
$$R_1 - \frac{B \cdot E \cdot (A+C) - A \cdot D \cdot (E-F)}{B \cdot D \cdot F \cdot (A+C)} = 0.00000$$
$$\frac{B \cdot E \cdot (A+C) - A \cdot D \cdot (E-F)}{B \cdot D \cdot F \cdot (A+C)} - \frac{N_2 \cdot N_3 \cdot N_5 + N_6 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_5 \cdot (N_1 + N_3)} = 0.00000$$



**Unit.  $ab := 1$   $N_1 := 2.48950$**

$$\mathbf{N}_2 := 2.06291 \quad \mathbf{N}_3 := 5.11287$$

$$N_4 := 3.19587$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3} \quad \mathbf{D} := \frac{1}{N_4}$$

$$\mathbf{bh} := \frac{N_1 \cdot N_3}{N_1 + N_3} \quad \mathbf{fh} := \frac{\mathbf{bh}}{N_1}$$

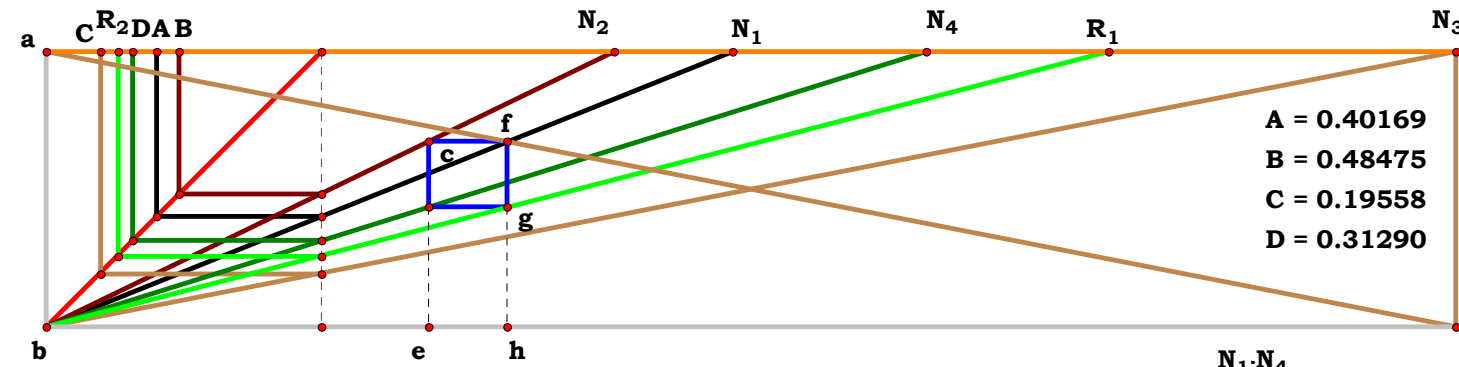
$$\mathbf{be} := \mathbf{N}_2 \cdot \mathbf{fh} \quad \mathbf{de} := \frac{\mathbf{be}}{\mathbf{N}_4} \quad \mathbf{R}_1 := \frac{\mathbf{bh}}{\mathbf{de}}$$

$$\mathbf{R}_1 = 3.856745 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$

$$R_1 - \frac{N_1 \cdot N_4}{N_2} = 0 \quad \text{An invisible Variable.}$$

$$\mathbf{N}_1 - \frac{1}{\mathbf{A}} = 0 \quad \mathbf{N}_2 - \frac{1}{\mathbf{B}} = 0 \quad \mathbf{N}_3 - \frac{1}{\mathbf{C}} = 0 \quad \mathbf{N}_4 - \frac{1}{\mathbf{D}} = 0$$

$$R_1 - \frac{B}{A \cdot D} = 0 \quad R_2 - \frac{A \cdot D}{B} = 0$$



$$R_1 - \frac{N_1 \cdot N_4}{N_2} = 0.00000$$

$$R_1 - \frac{B}{A \cdot D} = 0.00000$$

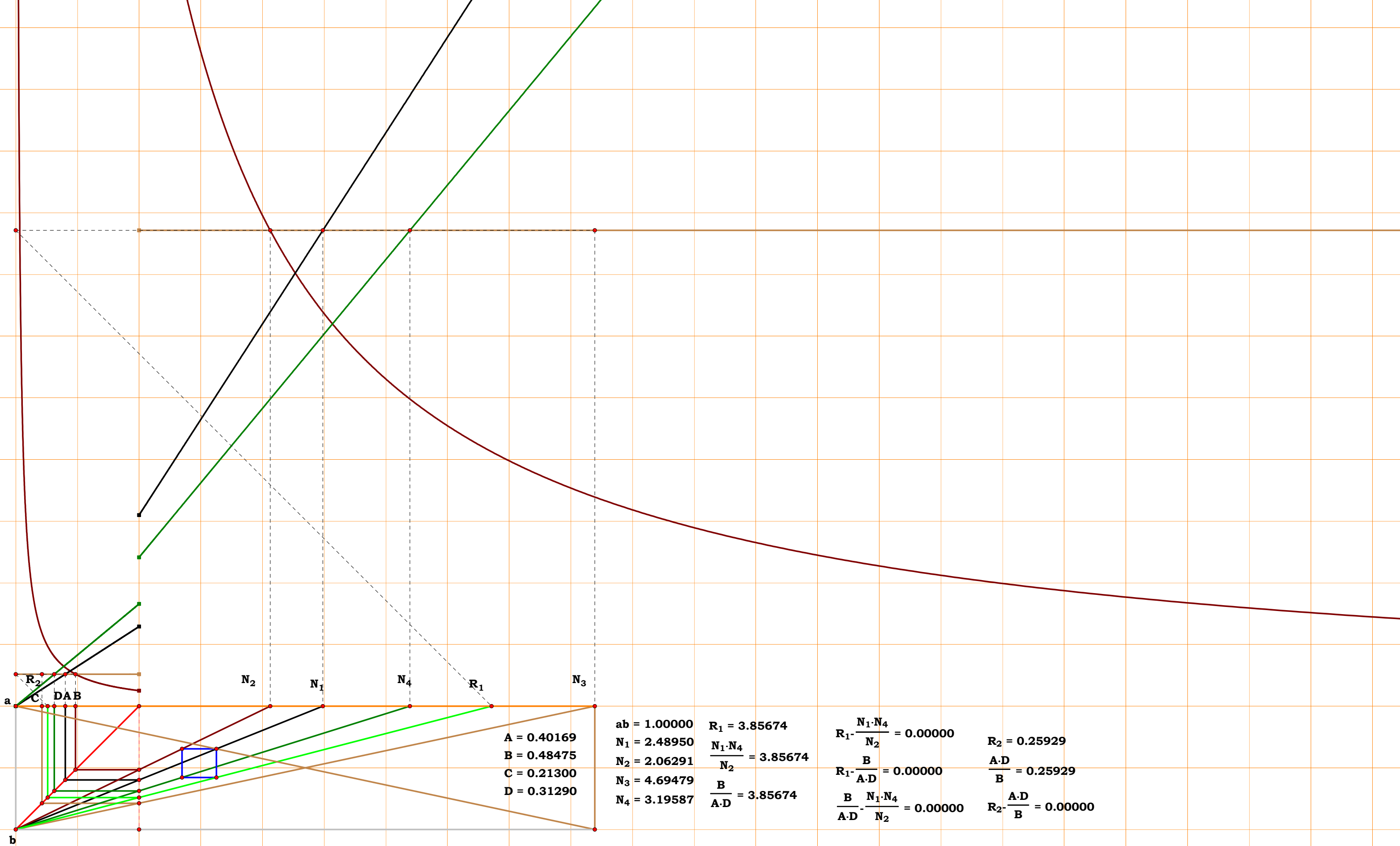
$$\frac{B}{A \cdot D} - \frac{N_1 \cdot N_4}{N_2} = 0.00000$$

<b>ab = 1.00000</b>	<b>R<sub>1</sub> = 3.85674</b>
<b>N<sub>1</sub> = 2.48950</b>	<b><math>\frac{N_1 \cdot N_4}{N_2} = 3.85674</math></b>
<b>N<sub>2</sub> = 2.06291</b>	
<b>N<sub>3</sub> = 5.11287</b>	<b><math>\frac{B}{A \cdot D} = 3.85674</math></b>
<b>N<sub>4</sub> = 3.19587</b>	

$$R_2 = 0.25929$$

$$\frac{A \cdot D}{B} = 0.25929$$

$$R_2 - \frac{A \cdot D}{B} = 0.00000$$



$ab = 1.00000$   
 $N_1 = 2.48950$   
 $N_2 = 2.06291$   
 $N_3 = 4.69479$   
 $N_4 = 3.19587$

$R_1 = 3.85674$   
 $\frac{N_1 \cdot N_4}{N_2} = 3.85674$   
 $\frac{B}{A \cdot D} = 3.85674$

$R_1 - \frac{N_1 \cdot N_4}{N_2} = 0.00000$   
 $R_1 - \frac{B}{A \cdot D} = 0.00000$   
 $\frac{B}{A \cdot D} - \frac{N_1 \cdot N_4}{N_2} = 0.00000$

$R_2 = 0.25929$   
 $\frac{A \cdot D}{B} = 0.25929$   
 $R_2 - \frac{A \cdot D}{B} = 0.00000$



1CST5R6

Given.

Unit.  $ab := 1$      $N_1 := 2.83549$

$N_2 := 3.85913$      $N_3 := 5.07005$

$N_4 := 3.18411$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$      $D := \frac{1}{N_4}$

Descriptions.

$ac := \frac{N_1 \cdot N_3}{N_1 + N_3}$      $cd := \frac{N_2 - ac}{N_2}$      $R_1 := \frac{N_4}{1 - cd}$

$R_1 = 6.757229$      $R_2 := \frac{1}{R_1}$

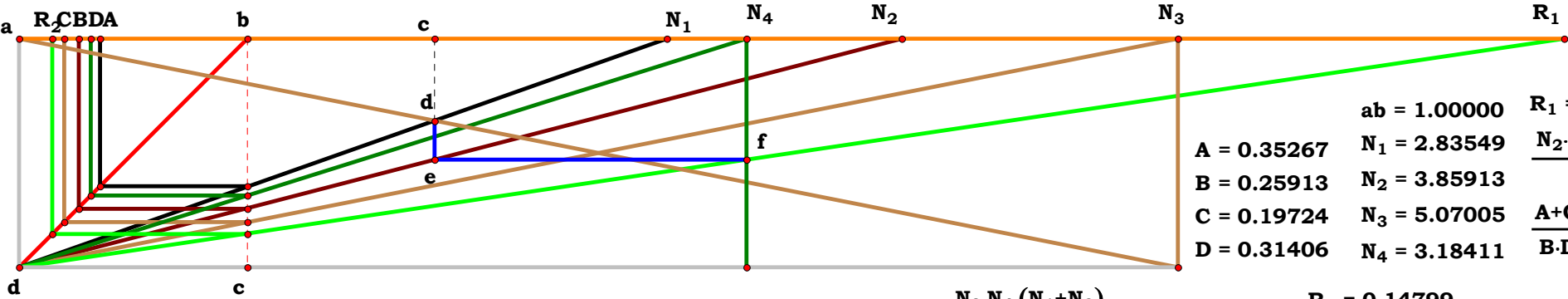
Definitions.

$R_1 - \frac{N_2 \cdot N_4 \cdot (N_1 + N_3)}{N_1 \cdot N_3} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$

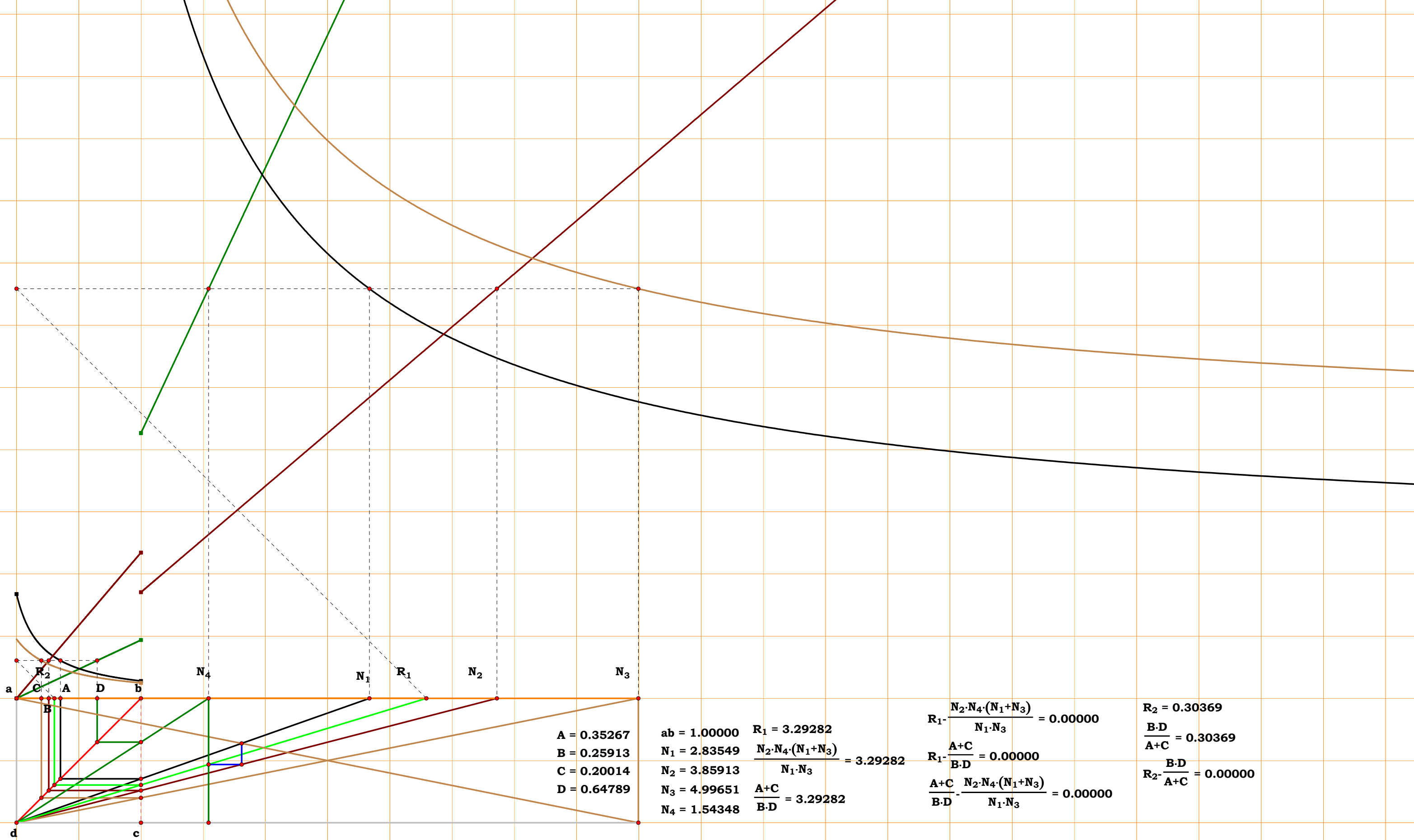
$N_3 - \frac{1}{C} = 0$      $N_4 - \frac{1}{D} = 0$

$R_1 - \frac{(A + C)}{B \cdot D} = 0$      $R_2 - \frac{B \cdot D}{(A + C)} = 0$



$ab = 1.00000$      $R_1 = 6.75723$   
 $A = 0.35267$      $N_1 = 2.83549$      $\frac{N_2 \cdot N_4 \cdot (N_1 + N_3)}{N_1 \cdot N_3} = 6.75723$   
 $B = 0.25913$      $N_2 = 3.85913$   
 $C = 0.19724$      $N_3 = 5.07005$      $\frac{A + C}{B \cdot D} = 6.75723$   
 $D = 0.31406$      $N_4 = 3.18411$

$R_1 - \frac{N_2 \cdot N_4 \cdot (N_1 + N_3)}{N_1 \cdot N_3} = 0.00000$      $R_2 = 0.14799$   
 $R_1 - \frac{A + C}{B \cdot D} = 0.00000$      $\frac{B \cdot D}{A + C} = 0.14799$   
 $\frac{A + C}{B \cdot D} - \frac{N_2 \cdot N_4 \cdot (N_1 + N_3)}{N_1 \cdot N_3} = 0.00000$      $R_2 - \frac{B \cdot D}{A + C} = 0.00000$





1CST5R7

Given.

Unit.  $ab := 1$   $N_1 := 1.60255$

$N_2 := 3.76536$   $N_3 := 3.19958$

$N_4 := 4.43923$   $N_5 := 2.59577$

$A := \frac{1}{N_1}$   $B := \frac{1}{N_2}$   $C := \frac{1}{N_3}$

$D := \frac{1}{N_4}$   $E := \frac{1}{N_5}$

Descriptions.

$aj := \frac{N_1 \cdot N_3}{N_1 + N_3}$   $jk := \frac{aj}{N_3}$   $ae := N_2 \cdot (1 - jk)$

$cd := \frac{ae}{N_4}$   $bd := N_5 \cdot (1 - cd)$   $R_1 := \frac{bd}{cd}$

$R_1 = 1.997355$   $R_2 := \frac{1}{R_1}$

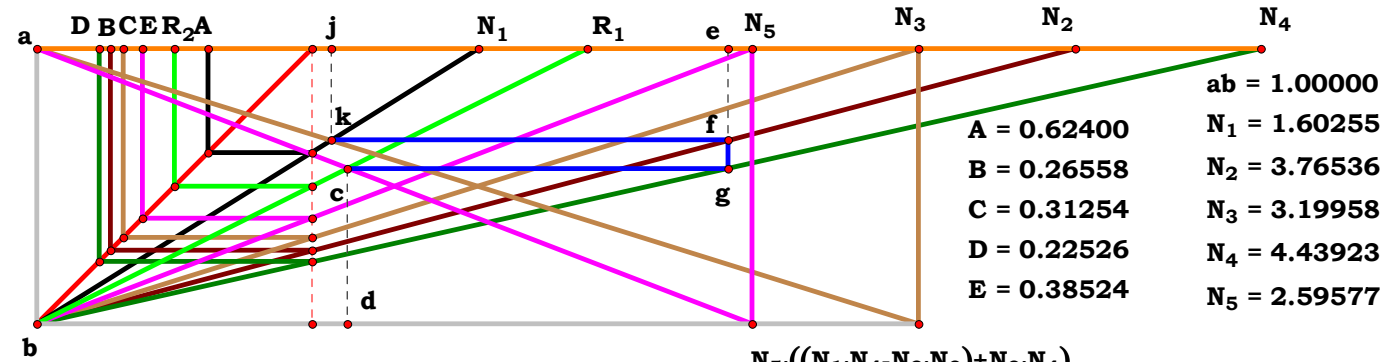
Definitions.

$R_1 - \frac{N_5 \cdot (N_1 \cdot N_4 - N_2 \cdot N_3 + N_3 \cdot N_4)}{N_2 \cdot N_3} = 0$

$N_1 - \frac{1}{A} = 0$   $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$   $N_4 - \frac{1}{D} = 0$   $N_5 - \frac{1}{E} = 0$

$R_1 - \frac{(A \cdot B - A \cdot D + B \cdot C)}{A \cdot D \cdot E} = 0$   $R_2 - \frac{A \cdot D \cdot E}{(A \cdot B - A \cdot D + B \cdot C)} = 0$



$R_1 - \frac{N_5 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_2 \cdot N_3} = 0.00000$

$R_1 - \frac{(A \cdot B - A \cdot D) + B \cdot C}{A \cdot D \cdot E} = 0.00000$

$\frac{(A \cdot B - A \cdot D) + B \cdot C}{A \cdot D \cdot E} - \frac{N_5 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_2 \cdot N_3} = 0.00000$

$R_1 = 1.99735$

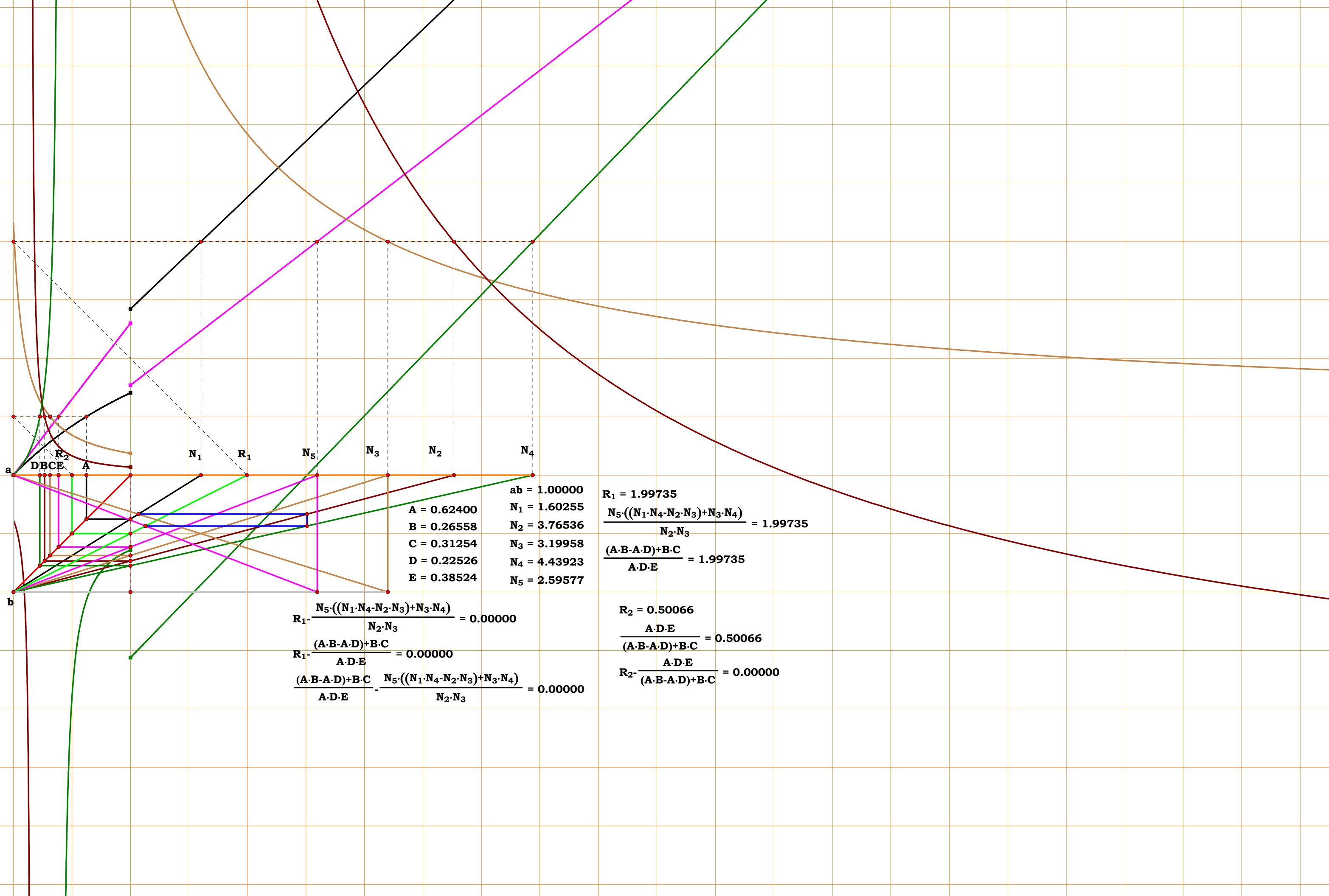
$\frac{N_5 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_2 \cdot N_3} = 1.99735$

$\frac{(A \cdot B - A \cdot D) + B \cdot C}{A \cdot D \cdot E} = 1.99735$

$R_2 = 0.50066$

$\frac{A \cdot D \cdot E}{(A \cdot B - A \cdot D) + B \cdot C} = 0.50066$

$R_2 - \frac{A \cdot D \cdot E}{(A \cdot B - A \cdot D) + B \cdot C} = 0.00000$



a

b

DBCE

R<sub>2</sub>

A

N<sub>1</sub>

R<sub>1</sub>

N<sub>5</sub>

N<sub>3</sub>

N<sub>2</sub>

N<sub>4</sub>

A = 0.62400  
B = 0.26558  
C = 0.31254  
D = 0.22526  
E = 0.38524

ab = 1.00000  
N<sub>1</sub> = 1.60255  
N<sub>2</sub> = 3.76536  
N<sub>3</sub> = 3.19958  
N<sub>4</sub> = 4.43923  
N<sub>5</sub> = 2.59577

$$R_1 - \frac{N_5 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_2 \cdot N_3} = 0.00000$$

$$R_1 - \frac{(A \cdot B - A \cdot D) + B \cdot C}{A \cdot D \cdot E} = 0.00000$$

$$\frac{(A \cdot B - A \cdot D) + B \cdot C}{A \cdot D \cdot E} - \frac{N_5 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_2 \cdot N_3} = 0.00000$$

$$R_1 = 1.99735$$

$$\frac{N_5 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_2 \cdot N_3} = 1.99735$$

$$\frac{(A \cdot B - A \cdot D) + B \cdot C}{A \cdot D \cdot E} = 1.99735$$

$$R_2 = 0.50066$$

$$\frac{A \cdot D \cdot E}{(A \cdot B - A \cdot D) + B \cdot C} = 0.50066$$

$$R_2 - \frac{A \cdot D \cdot E}{(A \cdot B - A \cdot D) + B \cdot C} = 0.00000$$





1CST5R8

Given.

Unit.  $ab := 1$      $N_1 := 2.06102$

$N_2 := 1.72533$      $N_3 := 3.23973$

$N_4 := 2.62030$      $N_5 := 1.39260$

$N_6 := 2.37787$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$      $D := \frac{1}{N_4}$      $E := \frac{1}{N_5}$      $F := \frac{1}{N_6}$

Descriptions.

$bp := \frac{N_1 \cdot N_3}{N_1 + N_3}$      $kp := \frac{bp}{N_1}$      $bh := N_2 \cdot kp$

$gh := \frac{bh}{N_4}$      $bd := N_5 \cdot gh$      $bj := \frac{bd}{1 - gh}$

$OP := \frac{bj}{bj + N_6}$      $R_1 := \frac{bp}{OP}$      $R_2 := \frac{1}{R_1}$

$R_1 = 4.453478$

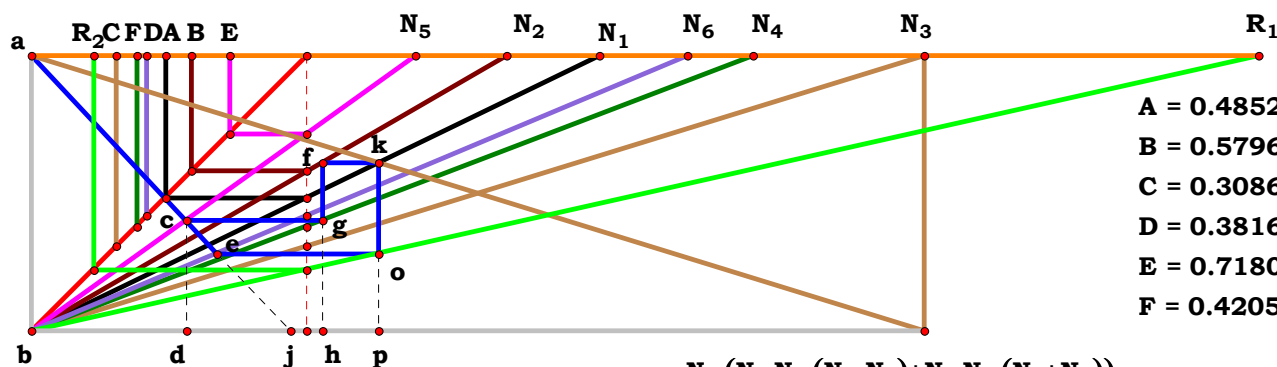
Definitions.

$$R_1 - \frac{N_1 \cdot [N_2 \cdot N_3 \cdot (N_5 - N_6) + N_4 \cdot N_6 \cdot (N_1 + N_3)]}{N_2 \cdot N_5 \cdot (N_1 + N_3)} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$N_4 - \frac{1}{D} = 0 \quad N_5 - \frac{1}{E} = 0 \quad N_6 - \frac{1}{F} = 0$$

$$R_1 - \frac{[A \cdot E \cdot (B - D) + B \cdot C \cdot E + A \cdot D \cdot F]}{A \cdot D \cdot F \cdot (A + C)} = 0 \quad R_2 - \frac{A \cdot D \cdot F \cdot (A + C)}{[A \cdot E \cdot (B - D) + B \cdot C \cdot E + A \cdot D \cdot F]} = 0$$



$A = 0.48520$   
 $B = 0.57960$   
 $C = 0.30867$   
 $D = 0.38164$   
 $E = 0.71808$   
 $F = 0.42054$

$ab = 1.00000$   
 $N_1 = 2.06102$   
 $N_2 = 1.72533$   
 $N_3 = 3.23973$   
 $N_4 = 2.62030$   
 $N_5 = 1.39260$   
 $N_6 = 2.37787$

$R_1 = 4.45349$

$$\frac{N_1 \cdot (N_2 \cdot N_3 \cdot (N_5 - N_6) + N_4 \cdot N_6 \cdot (N_1 + N_3))}{N_2 \cdot N_5 \cdot (N_1 + N_3)} = 4.45349$$

$$\frac{(A \cdot E \cdot (B - D) + B \cdot C \cdot E + A \cdot D \cdot F)}{(A \cdot D \cdot F \cdot (A + C))} = 4.45349$$

$R_2 = 0.22454$

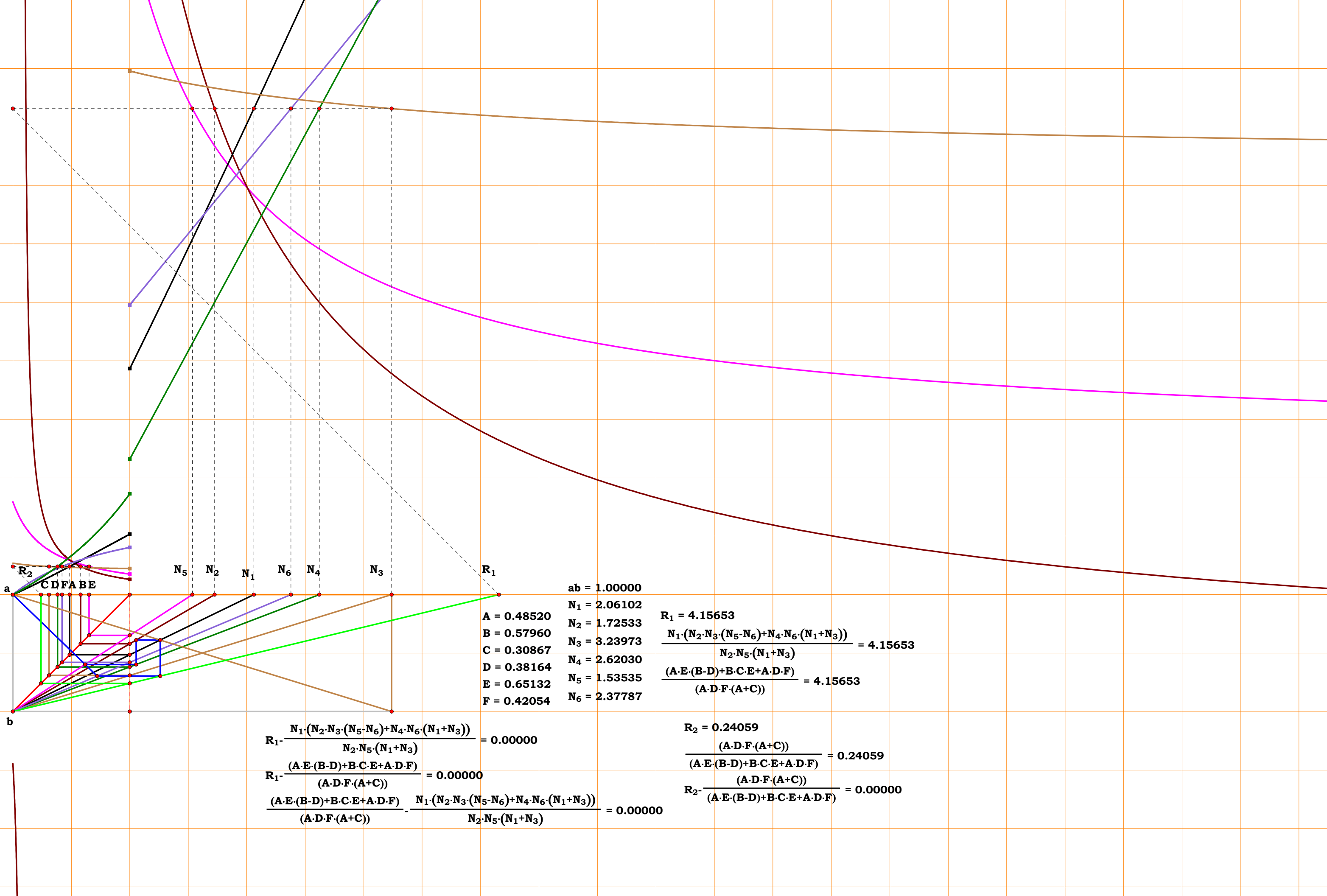
$$\frac{(A \cdot D \cdot F \cdot (A + C))}{(A \cdot E \cdot (B - D) + B \cdot C \cdot E + A \cdot D \cdot F)} = 0.22454$$

$$R_2 - \frac{(A \cdot D \cdot F \cdot (A + C))}{(A \cdot E \cdot (B - D) + B \cdot C \cdot E + A \cdot D \cdot F)} = 0.00000$$

$$R_1 - \frac{N_1 \cdot (N_2 \cdot N_3 \cdot (N_5 - N_6) + N_4 \cdot N_6 \cdot (N_1 + N_3))}{N_2 \cdot N_5 \cdot (N_1 + N_3)} = 0.00000$$

$$R_1 - \frac{(A \cdot E \cdot (B - D) + B \cdot C \cdot E + A \cdot D \cdot F)}{(A \cdot D \cdot F \cdot (A + C))} = 0.00000$$

$$\frac{(A \cdot E \cdot (B - D) + B \cdot C \cdot E + A \cdot D \cdot F)}{(A \cdot D \cdot F \cdot (A + C))} - \frac{N_1 \cdot (N_2 \cdot N_3 \cdot (N_5 - N_6) + N_4 \cdot N_6 \cdot (N_1 + N_3))}{N_2 \cdot N_5 \cdot (N_1 + N_3)} = 0.00000$$



a  
b

C D F A B E

N<sub>5</sub> N<sub>2</sub> N<sub>1</sub> N<sub>6</sub> N<sub>4</sub> N<sub>3</sub>

R<sub>1</sub>

ab = 1.00000  
 N<sub>1</sub> = 2.06102  
 N<sub>2</sub> = 1.72533  
 N<sub>3</sub> = 3.23973  
 N<sub>4</sub> = 2.62030  
 N<sub>5</sub> = 1.53535  
 N<sub>6</sub> = 2.37787  
 A = 0.48520  
 B = 0.57960  
 C = 0.30867  
 D = 0.38164  
 E = 0.65132  
 F = 0.42054

$$R_1 - \frac{N_1 \cdot (N_2 \cdot N_3 \cdot (N_5 - N_6) + N_4 \cdot N_6 \cdot (N_1 + N_3))}{N_2 \cdot N_5 \cdot (N_1 + N_3)} = 0.00000$$

$$R_1 - \frac{(A \cdot E \cdot (B - D) + B \cdot C \cdot E + A \cdot D \cdot F)}{(A \cdot D \cdot F \cdot (A + C))} = 0.00000$$

$$\frac{(A \cdot E \cdot (B - D) + B \cdot C \cdot E + A \cdot D \cdot F)}{(A \cdot D \cdot F \cdot (A + C))} - \frac{N_1 \cdot (N_2 \cdot N_3 \cdot (N_5 - N_6) + N_4 \cdot N_6 \cdot (N_1 + N_3))}{N_2 \cdot N_5 \cdot (N_1 + N_3)} = 0.00000$$

$$R_1 = 4.15653$$

$$\frac{N_1 \cdot (N_2 \cdot N_3 \cdot (N_5 - N_6) + N_4 \cdot N_6 \cdot (N_1 + N_3))}{N_2 \cdot N_5 \cdot (N_1 + N_3)} = 4.15653$$

$$\frac{(A \cdot E \cdot (B - D) + B \cdot C \cdot E + A \cdot D \cdot F)}{(A \cdot D \cdot F \cdot (A + C))} = 4.15653$$

$$R_2 = 0.24059$$

$$\frac{(A \cdot D \cdot F \cdot (A + C))}{(A \cdot E \cdot (B - D) + B \cdot C \cdot E + A \cdot D \cdot F)} = 0.24059$$

$$R_2 - \frac{(A \cdot D \cdot F \cdot (A + C))}{(A \cdot E \cdot (B - D) + B \cdot C \cdot E + A \cdot D \cdot F)} = 0.00000$$



Given.

Unit.  $ab := 1 \quad N_1 := 2.31237$

$N_2 := 1.53814 \quad N_3 := 3.65489$

$N_4 := 2.63692 \quad N_5 := 2.02924$

$N_6 := 3.07292 \quad N_7 := 1.81040$

$A := \frac{1}{N_1} \quad B := \frac{1}{N_2} \quad C := \frac{1}{N_3} \quad D := \frac{1}{N_4}$

$E := \frac{1}{N_5} \quad F := \frac{1}{N_6} \quad G := \frac{1}{N_7}$

Descriptions.

$bq := \frac{N_1 \cdot N_3}{N_1 + N_3} \quad ko := \frac{bq}{N_1} \quad bo := N_2 \cdot ko \quad mo := \frac{bo}{N_4}$

$bd := N_5 \cdot mo \quad bg := \frac{bd}{1 - mo} \quad bf := \frac{bg \cdot N_6}{bg + N_6} \quad ef := \frac{bf}{N_6}$

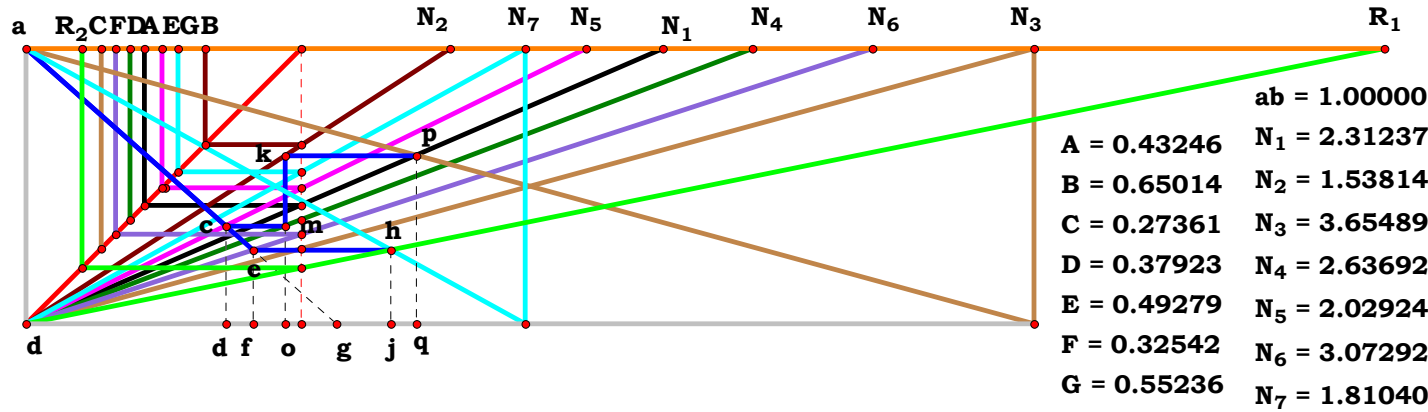
$bj := N_7 \cdot (1 - ef) \quad R_1 := \frac{bj}{ef} \quad R_1 = 4.931985 \quad R_2 := \frac{1}{R_1}$

Definitions.

$R_1 - \frac{N_6 \cdot N_7 \cdot (N_1 \cdot N_4 - N_2 \cdot N_3 + N_3 \cdot N_4)}{N_2 \cdot N_3 \cdot N_5} = 0$

$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0 \quad N_4 - \frac{1}{D} = 0 \quad N_5 - \frac{1}{E} = 0 \quad N_6 - \frac{1}{F} = 0 \quad N_7 - \frac{1}{G} = 0$

$R_1 - \frac{E \cdot (A \cdot B - A \cdot D + B \cdot C)}{A \cdot D \cdot F \cdot G} = 0 \quad R_2 - \frac{A \cdot D \cdot F \cdot G}{E \cdot (A \cdot B - A \cdot D + B \cdot C)} = 0$



$ab = 1.00000$   
 $A = 0.43246 \quad N_1 = 2.31237$   
 $B = 0.65014 \quad N_2 = 1.53814$   
 $C = 0.27361 \quad N_3 = 3.65489$   
 $D = 0.37923 \quad N_4 = 2.63692$   
 $E = 0.49279 \quad N_5 = 2.02924$   
 $F = 0.32542 \quad N_6 = 3.07292$   
 $G = 0.55236 \quad N_7 = 1.81040$

$R_1 = 4.93195$   
 $\frac{N_6 \cdot N_7 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_2 \cdot N_3 \cdot N_5} = 4.93195$   
 $\frac{(E \cdot ((A \cdot B - A \cdot D) + B \cdot C))}{(A \cdot D \cdot F \cdot G)} = 4.93195$

$R_1 - \frac{N_6 \cdot N_7 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_2 \cdot N_3 \cdot N_5} = 0.00000$

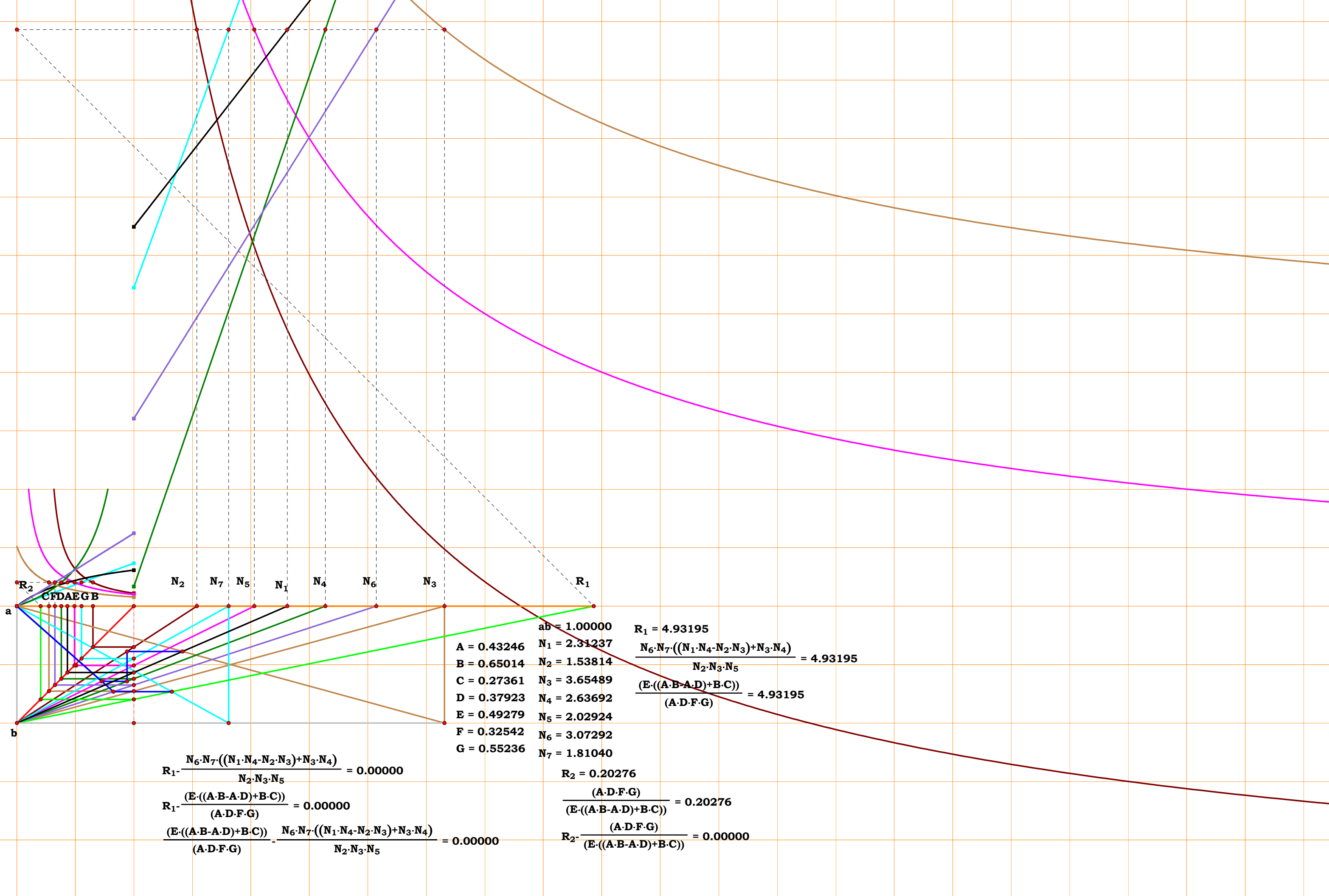
$R_1 - \frac{(E \cdot ((A \cdot B - A \cdot D) + B \cdot C))}{(A \cdot D \cdot F \cdot G)} = 0.00000$

$\frac{(E \cdot ((A \cdot B - A \cdot D) + B \cdot C))}{(A \cdot D \cdot F \cdot G)} - \frac{N_6 \cdot N_7 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_2 \cdot N_3 \cdot N_5} = 0.00000$

$R_2 = 0.20276$

$\frac{(A \cdot D \cdot F \cdot G)}{(E \cdot ((A \cdot B - A \cdot D) + B \cdot C))} = 0.20276$

$R_2 - \frac{(A \cdot D \cdot F \cdot G)}{(E \cdot ((A \cdot B - A \cdot D) + B \cdot C))} = 0.00000$



a

b

N<sub>2</sub> N<sub>7</sub> N<sub>5</sub> N<sub>1</sub> N<sub>4</sub> N<sub>6</sub> N<sub>3</sub>

R<sub>1</sub>

$$R_1 - \frac{N_6 \cdot N_7 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_2 \cdot N_3 \cdot N_5} = 0.00000$$

$$R_1 - \frac{(E \cdot ((A \cdot B - A \cdot D) + B \cdot C))}{(A \cdot D \cdot F \cdot G)} = 0.00000$$

$$\frac{(E \cdot ((A \cdot B - A \cdot D) + B \cdot C))}{(A \cdot D \cdot F \cdot G)} - \frac{N_6 \cdot N_7 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_2 \cdot N_3 \cdot N_5} = 0.00000$$

A = 0.43246  
B = 0.65014  
C = 0.27361  
D = 0.37923  
E = 0.49279  
F = 0.32542  
G = 0.55236

N<sub>1</sub> = 2.31237  
N<sub>2</sub> = 1.53814  
N<sub>3</sub> = 3.65489  
N<sub>4</sub> = 2.63692  
N<sub>5</sub> = 2.02924  
N<sub>6</sub> = 3.07292  
N<sub>7</sub> = 1.81040

R<sub>2</sub> = 0.20276

$$\frac{(A \cdot D \cdot F \cdot G)}{(E \cdot ((A \cdot B - A \cdot D) + B \cdot C))} = 0.20276$$

$$R_2 - \frac{(A \cdot D \cdot F \cdot G)}{(E \cdot ((A \cdot B - A \cdot D) + B \cdot C))} = 0.00000$$

ab = 1.00000

R<sub>1</sub> = 4.93195

$$\frac{N_6 \cdot N_7 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4)}{N_2 \cdot N_3 \cdot N_5} = 4.93195$$

$$\frac{(E \cdot ((A \cdot B - A \cdot D) + B \cdot C))}{(A \cdot D \cdot F \cdot G)} = 4.93195$$



1CST5R10

Given.

Unit.  $ab := 1$      $N_1 := 3.04914$

$N_2 := 2.21884$      $N_3 := 1.60859$

$N_4 := 3.83666$      $N_5 := 2.49584$

$N_6 := 5.09601$

$$A := \frac{1}{N_1} \quad B := \frac{1}{N_2} \quad C := \frac{1}{N_3}$$

$$D := \frac{1}{N_4} \quad E := \frac{1}{N_5} \quad F := \frac{1}{N_6}$$

Descriptions.

$$ae := \frac{N_1 \cdot N_3}{N_1 + N_3} \quad ef := \frac{ae}{N_2} \quad ah := N_4 \cdot ef$$

$$hj := 1 - \frac{ah}{N_5} \quad ac := N_6 \cdot hj \quad R_1 := \frac{ac}{1 - hj}$$

$$R_1 = 1.889068 \quad R_2 := \frac{1}{R_1}$$

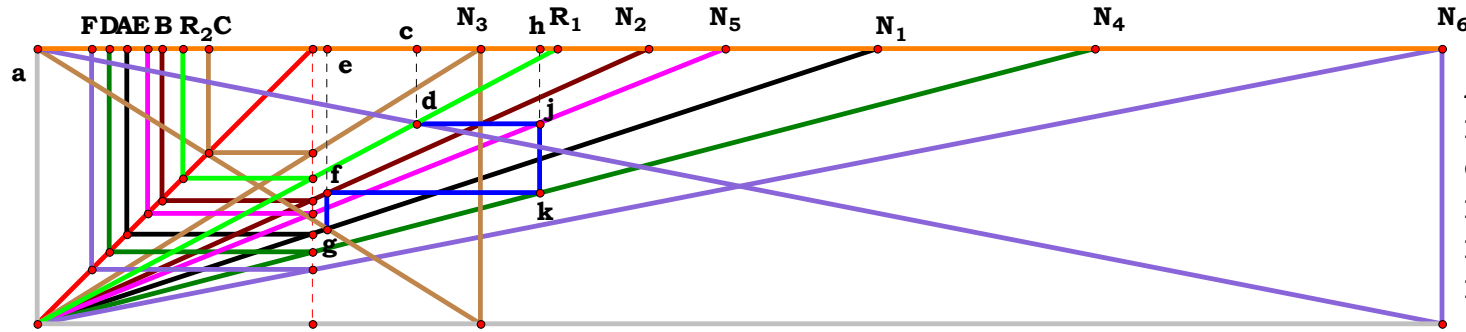
Definitions.

$$R_1 - \frac{N_6 \cdot [N_2 \cdot N_5 \cdot (N_1 + N_3) - N_1 \cdot N_3 \cdot N_4]}{N_1 \cdot N_3 \cdot N_4} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$N_4 - \frac{1}{D} = 0 \quad N_5 - \frac{1}{E} = 0 \quad N_6 - \frac{1}{F} = 0$$

$$R_1 - \frac{(A \cdot D - B \cdot E + C \cdot D)}{B \cdot E \cdot F} = 0 \quad R_2 - \frac{B \cdot E \cdot F}{(A \cdot D - B \cdot E + C \cdot D)} = 0$$



$$ab = 1.00000$$

$$N_1 = 3.04914$$

$$N_2 = 2.21884$$

$$N_3 = 1.60859$$

$$N_4 = 3.83666$$

$$N_5 = 2.49584$$

$$N_6 = 5.09601$$

$$A = 0.32796$$

$$B = 0.45069$$

$$C = 0.62166$$

$$D = 0.26064$$

$$E = 0.40067$$

$$F = 0.19623$$

$$R_1 = 1.88906$$

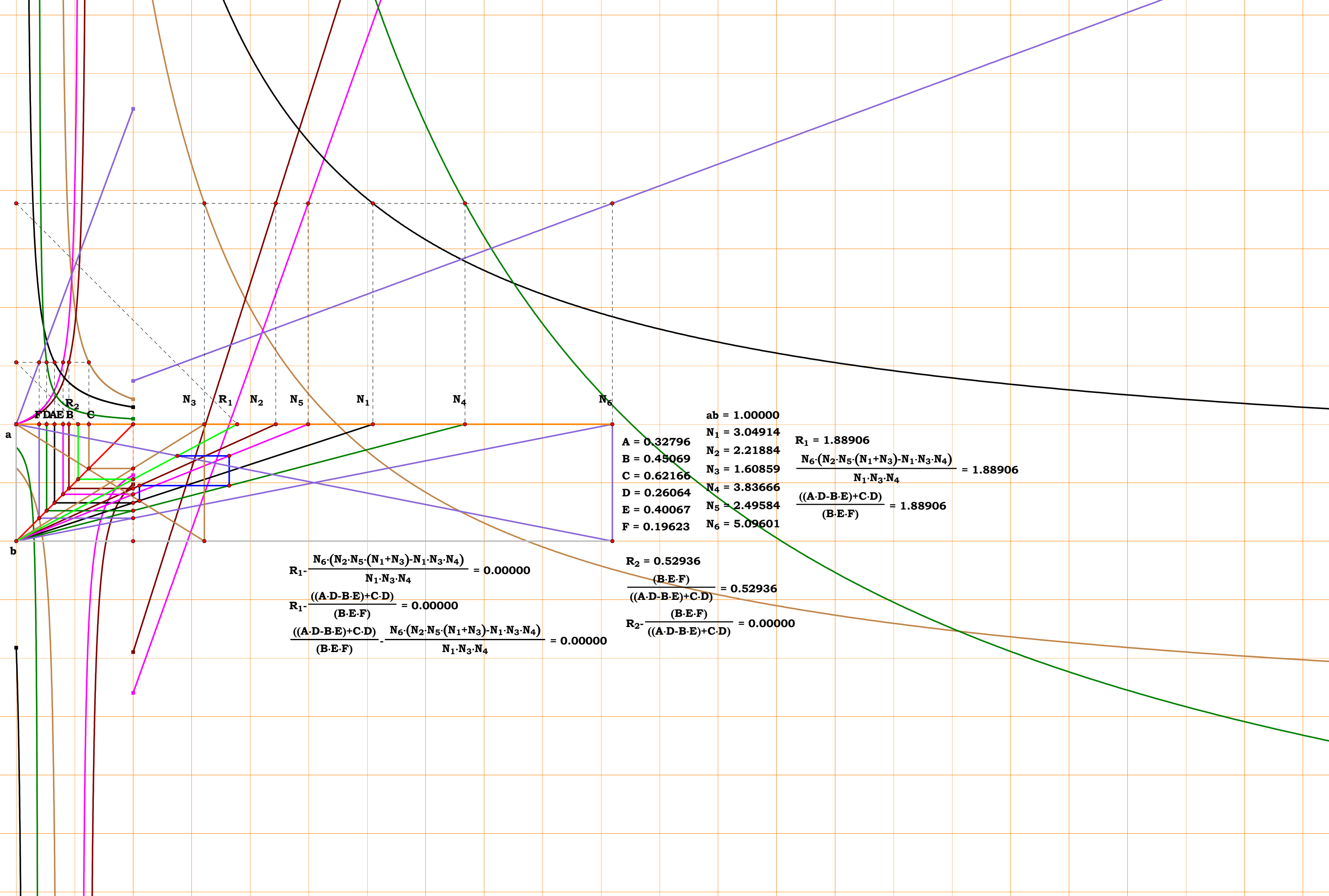
$$\frac{N_6 \cdot (N_2 \cdot N_5 \cdot (N_1 + N_3) - N_1 \cdot N_3 \cdot N_4)}{N_1 \cdot N_3 \cdot N_4} = 1.88906$$

$$\frac{((A \cdot D - B \cdot E) + C \cdot D)}{(B \cdot E \cdot F)} = 1.88906$$

$$R_2 = 0.52936$$

$$\frac{(B \cdot E \cdot F)}{((A \cdot D - B \cdot E) + C \cdot D)} = 0.52936$$

$$R_2 - \frac{(B \cdot E \cdot F)}{((A \cdot D - B \cdot E) + C \cdot D)} = 0.00000$$





1CST5R11

Given.

Unit.  $ab := 1$   $N_1 := 2.72791$

$N_2 := 1.90017$   $N_3 := 2.35362$

$N_4 := 4.34382$   $N_5 := 1.52542$

$N_6 := 3.32276$

$A := \frac{1}{N_1}$   $B := \frac{1}{N_2}$   $C := \frac{1}{N_3}$

$D := \frac{1}{N_4}$   $E := \frac{1}{N_5}$   $F := \frac{1}{N_6}$

Descriptions.

$fh := \frac{N_3}{N_1 + N_3}$   $bh := N_2 \cdot fh$   $gh := \frac{bh}{N_4}$

$bn := \frac{bh}{1 - gh}$   $jn := \frac{bn}{N_5}$   $am := N_6 \cdot (1 - jn)$

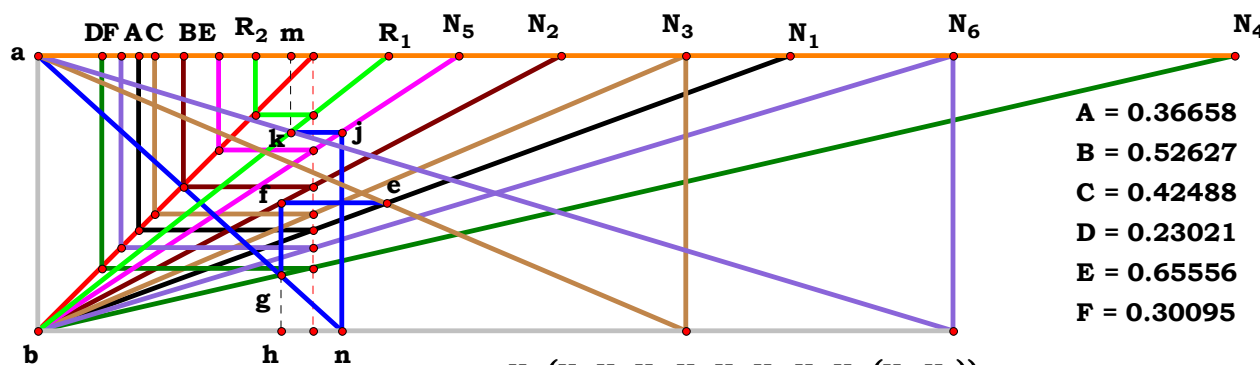
$R_1 := \frac{am}{jn}$   $R_1 = 1.269479$   $R_2 := \frac{1}{R_1}$

Definitions.

$$R_1 - \frac{N_6 \cdot [N_1 \cdot N_4 \cdot N_5 - N_2 \cdot N_3 \cdot N_4 - N_3 \cdot N_5 \cdot (N_2 - N_4)]}{N_2 \cdot N_3 \cdot N_4} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0 \quad N_4 - \frac{1}{D} = 0 \quad N_5 - \frac{1}{E} = 0 \quad N_6 - \frac{1}{F} = 0$$

$$R_1 - \frac{(A \cdot B - A \cdot D + B \cdot C - A \cdot E)}{A \cdot E \cdot F} = 0 \quad R_2 - \frac{A \cdot E \cdot F}{(A \cdot B - A \cdot D + B \cdot C - A \cdot E)} = 0$$



$A = 0.36658$   
 $B = 0.52627$   
 $C = 0.42488$   
 $D = 0.23021$   
 $E = 0.65556$   
 $F = 0.30095$

$ab = 1.00000$   
 $N_1 = 2.72791$   
 $N_2 = 1.90017$   
 $N_3 = 2.35362$   
 $N_4 = 4.34382$   
 $N_5 = 1.52542$   
 $N_6 = 3.32276$

$R_1 = 1.26948$   

$$\frac{N_6 \cdot (N_1 \cdot N_4 \cdot N_5 - N_2 \cdot N_3 \cdot N_4 - N_3 \cdot N_5 \cdot (N_2 - N_4))}{N_2 \cdot N_3 \cdot N_4} = 1.26948$$
  

$$\frac{(((A \cdot B - A \cdot D) + B \cdot C) - A \cdot E)}{(A \cdot E \cdot F)} = 1.26948$$

$$R_1 - \frac{N_6 \cdot (N_1 \cdot N_4 \cdot N_5 - N_2 \cdot N_3 \cdot N_4 - N_3 \cdot N_5 \cdot (N_2 - N_4))}{N_2 \cdot N_3 \cdot N_4} = 0.00000$$

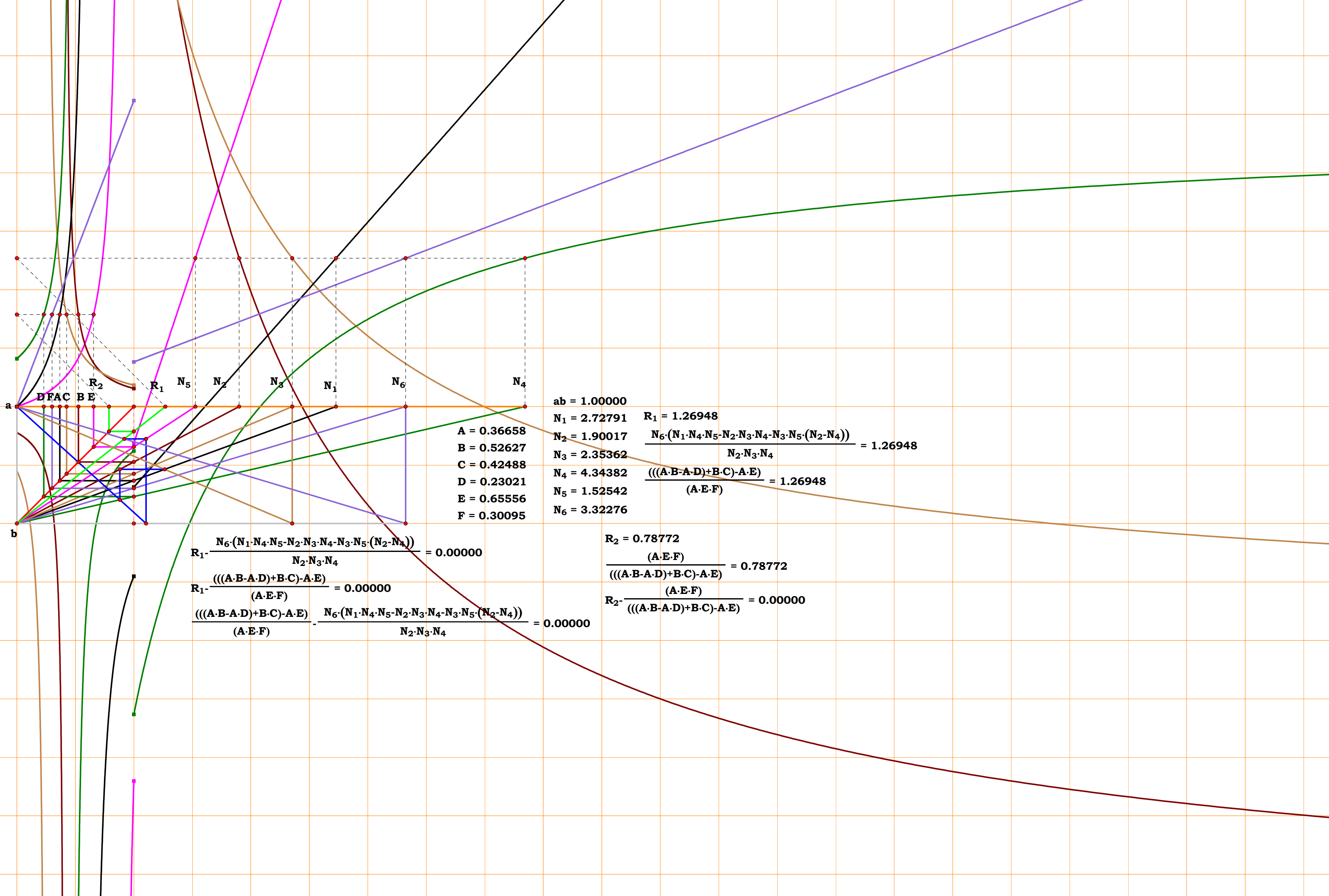
$$R_1 - \frac{(((A \cdot B - A \cdot D) + B \cdot C) - A \cdot E)}{(A \cdot E \cdot F)} = 0.00000$$

$$\frac{(((A \cdot B - A \cdot D) + B \cdot C) - A \cdot E)}{(A \cdot E \cdot F)} - \frac{N_6 \cdot (N_1 \cdot N_4 \cdot N_5 - N_2 \cdot N_3 \cdot N_4 - N_3 \cdot N_5 \cdot (N_2 - N_4))}{N_2 \cdot N_3 \cdot N_4} = 0.00000$$

$R_2 = 0.78772$

$$\frac{(A \cdot E \cdot F)}{(((A \cdot B - A \cdot D) + B \cdot C) - A \cdot E)} = 0.78772$$

$$R_2 - \frac{(A \cdot E \cdot F)}{(((A \cdot B - A \cdot D) + B \cdot C) - A \cdot E)} = 0.00000$$



a

b

DFAC

B

C

D

E

F

BE

R<sub>2</sub>

R<sub>1</sub>

N<sub>5</sub>

N<sub>2</sub>

N<sub>3</sub>

N<sub>1</sub>

N<sub>6</sub>

N<sub>4</sub>

A = 0.36658  
B = 0.52627  
C = 0.42488  
D = 0.23021  
E = 0.65556  
F = 0.30095

ab = 1.00000  
N<sub>1</sub> = 2.72791  
N<sub>2</sub> = 1.90017  
N<sub>3</sub> = 2.35362  
N<sub>4</sub> = 4.34382  
N<sub>5</sub> = 1.52542  
N<sub>6</sub> = 3.32276

R<sub>1</sub> = 1.26948

$$\frac{N_6 \cdot (N_1 \cdot N_4 \cdot N_5 - N_2 \cdot N_3 \cdot N_4 - N_3 \cdot N_5 \cdot (N_2 - N_4))}{N_2 \cdot N_3 \cdot N_4} = 1.26948$$

$$\frac{(((A \cdot B - A \cdot D) + B \cdot C) - A \cdot E)}{(A \cdot E \cdot F)} = 1.26948$$

R<sub>2</sub> = 0.78772

$$\frac{(A \cdot E \cdot F)}{(((A \cdot B - A \cdot D) + B \cdot C) - A \cdot E)} = 0.78772$$

$$R_2 \cdot \frac{(A \cdot E \cdot F)}{(((A \cdot B - A \cdot D) + B \cdot C) - A \cdot E)} = 0.00000$$

$$R_1 \cdot \frac{N_6 \cdot (N_1 \cdot N_4 \cdot N_5 - N_2 \cdot N_3 \cdot N_4 - N_3 \cdot N_5 \cdot (N_2 - N_4))}{N_2 \cdot N_3 \cdot N_4} = 0.00000$$

$$R_1 \cdot \frac{(((A \cdot B - A \cdot D) + B \cdot C) - A \cdot E)}{(A \cdot E \cdot F)} = 0.00000$$

$$\frac{(((A \cdot B - A \cdot D) + B \cdot C) - A \cdot E)}{(A \cdot E \cdot F)} - \frac{N_6 \cdot (N_1 \cdot N_4 \cdot N_5 - N_2 \cdot N_3 \cdot N_4 - N_3 \cdot N_5 \cdot (N_2 - N_4))}{N_2 \cdot N_3 \cdot N_4} = 0.00000$$



**1CST5R12**

Unit.  $ab := 1$      $N_1 := 2.98779$ 
$$N_2 := 1.52557 \quad N_3 := 4.93875$$
$$N_4 := 2.21620$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3} \quad \mathbf{D} := \frac{1}{N_4}$$

$$\mathbf{ce} := \frac{\mathbf{N}_3}{\mathbf{N}_1 + \mathbf{N}_3} \quad \mathbf{be} := \mathbf{N}_2 \cdot \mathbf{ce}$$

$$\mathbf{de} := \frac{\mathbf{be}}{N_4} \quad \mathbf{bg} := \frac{\mathbf{be}}{1 - \mathbf{de}}$$

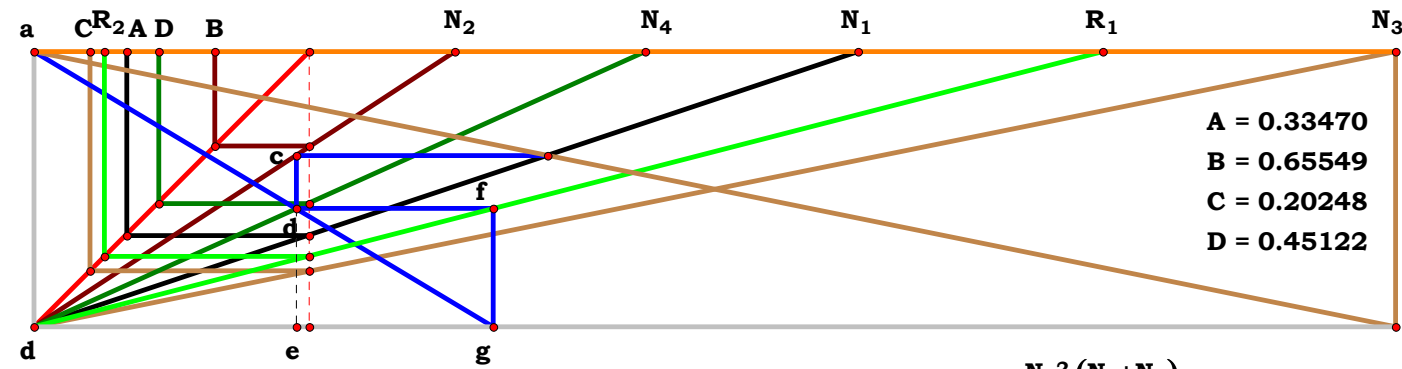
$$\mathbf{R}_1 := \frac{\mathbf{bg}}{\mathbf{de}} \quad \mathbf{R}_1 = 3.880585 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$

$$R_1 - \frac{N_4^2 \cdot (N_1 + N_3)}{N_1 \cdot N_4 - N_2 \cdot N_3 + N_3 \cdot N_4} = 0$$

$$\mathbf{N}_1 - \frac{1}{\mathbf{A}} = 0 \quad \mathbf{N}_2 - \frac{1}{\mathbf{B}} = 0$$

$$N_3 - \frac{1}{C} = 0 \quad N_4 - \frac{1}{D} = 0$$

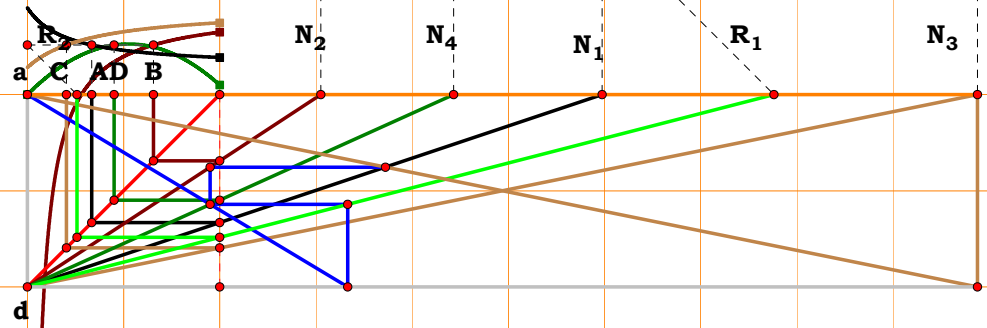
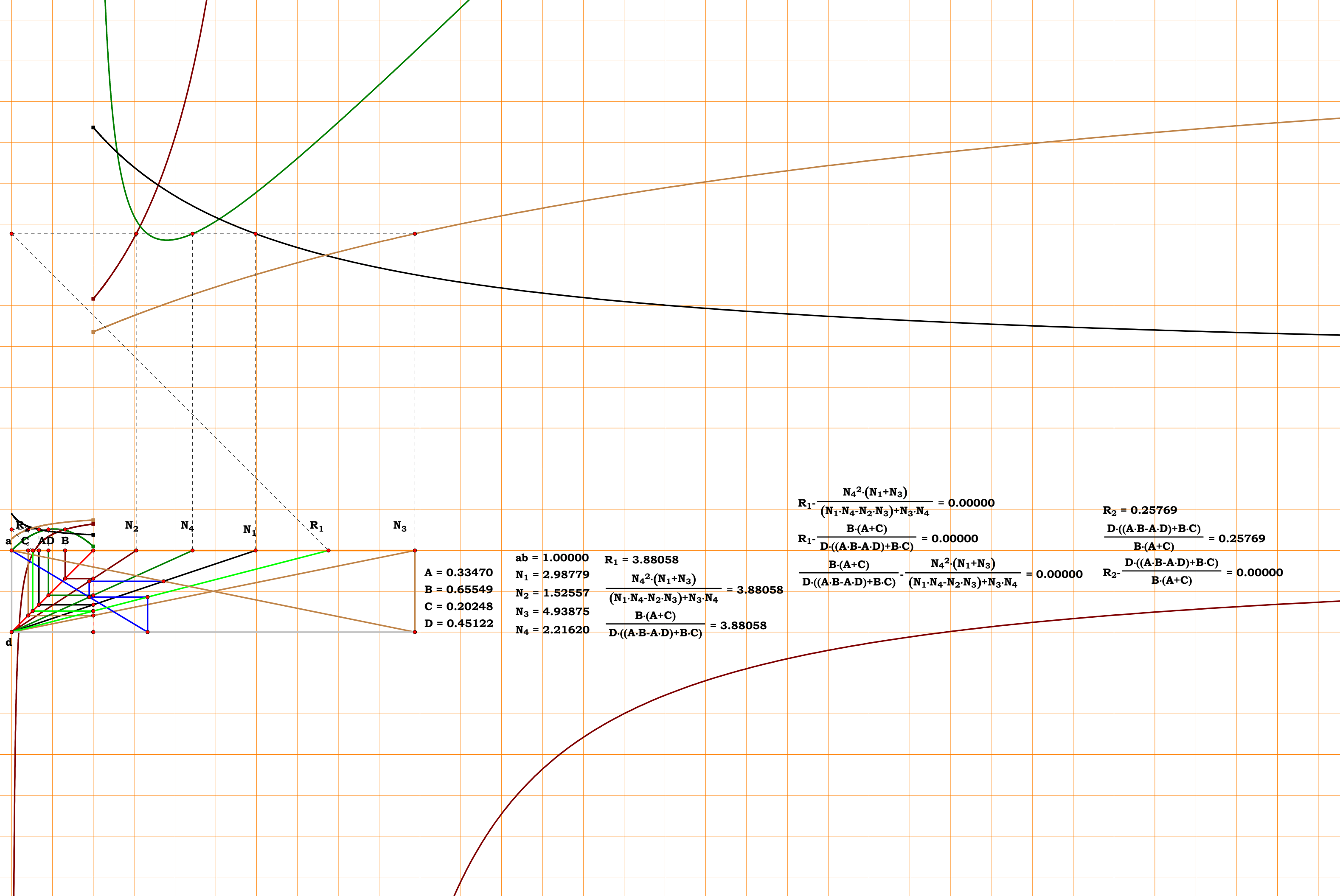
$$\mathbf{R}_1 - \frac{\mathbf{B} \cdot (\mathbf{A} + \mathbf{C})}{\mathbf{D} \cdot (\mathbf{A} \cdot \mathbf{B} - \mathbf{A} \cdot \mathbf{D} + \mathbf{B} \cdot \mathbf{C})} = 0 \quad \mathbf{R}_2 - \frac{\mathbf{D} \cdot (\mathbf{A} \cdot \mathbf{B} - \mathbf{A} \cdot \mathbf{D} + \mathbf{B} \cdot \mathbf{C})}{\mathbf{B} \cdot (\mathbf{A} + \mathbf{C})} = 0$$



$$\begin{aligned} R_1 \cdot \frac{N_4^2 \cdot (N_1 + N_3)}{(N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4} &= 0.00000 \\ R_1 \cdot \frac{B \cdot (A + C)}{D \cdot ((A \cdot B - A \cdot D) + B \cdot C)} &= 0.00000 \\ \frac{B \cdot (A + C)}{D \cdot ((A \cdot B - A \cdot D) + B \cdot C)} - \frac{N_4^2 \cdot (N_1 + N_3)}{(N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4} &= 0.00000 \end{aligned}$$

$$\begin{aligned} R_1 &= 3.88058 \\ \frac{N_4^2 \cdot (N_1 + N_3)}{(N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4} &= 3.88058 \\ \frac{B \cdot (A + C)}{D \cdot ((A \cdot B - A \cdot D) + B \cdot C)} &= 3.88058 \end{aligned}$$

$$\begin{aligned} R_2 &= 0.25769 \\ \frac{D \cdot ((A \cdot B - A \cdot D) + B \cdot C)}{B \cdot (A + C)} &= 0.25769 \\ R_2 - \frac{D \cdot ((A \cdot B - A \cdot D) + B \cdot C)}{B \cdot (A + C)} &= 0.00000 \end{aligned}$$



A = 0.33470  
B = 0.65549  
C = 0.20248  
D = 0.45122

ab = 1.00000  
N<sub>1</sub> = 2.98779  
N<sub>2</sub> = 1.52557  
N<sub>3</sub> = 4.93875  
N<sub>4</sub> = 2.21620

$R_1 = 3.88058$   
$$\frac{N_4^2 \cdot (N_1 + N_3)}{(N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4} = 3.88058$$
$$\frac{B \cdot (A + C)}{D \cdot ((A \cdot B - A \cdot D) + B \cdot C)} = 3.88058$$

$$R_1 - \frac{N_4^2 \cdot (N_1 + N_3)}{(N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4} = 0.00000$$

$$R_1 - \frac{B \cdot (A + C)}{D \cdot ((A \cdot B - A \cdot D) + B \cdot C)} = 0.00000$$

$$\frac{B \cdot (A + C)}{D \cdot ((A \cdot B - A \cdot D) + B \cdot C)} - \frac{N_4^2 \cdot (N_1 + N_3)}{(N_1 \cdot N_4 - N_2 \cdot N_3) + N_3 \cdot N_4} = 0.00000$$

$R_2 = 0.25769$   
$$\frac{D \cdot ((A \cdot B - A \cdot D) + B \cdot C)}{B \cdot (A + C)} = 0.25769$$

$$R_2 - \frac{D \cdot ((A \cdot B - A \cdot D) + B \cdot C)}{B \cdot (A + C)} = 0.00000$$



1CST5R13

Given.

Unit.  $ab := 1$     $N_1 := 2.82636$

$N_2 := 1.48736$     $N_3 := 3.33108$

$N_4 := 1.98549$

$A := \frac{1}{N_1}$     $B := \frac{1}{N_2}$     $C := \frac{1}{N_3}$     $D := \frac{1}{N_4}$

Descriptions.

$ce := \frac{N_3}{N_1 + N_3}$     $be := N_2 \cdot ce$     $bh := \frac{be}{1 - ce}$

$df := \frac{bh}{bh + N_4}$     $R_1 := \frac{bh}{df}$

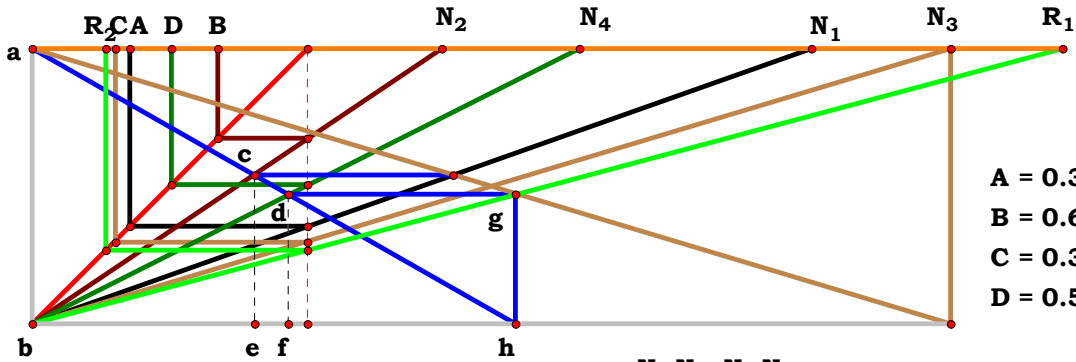
$R_1 = 3.738457$     $R_2 := \frac{1}{R_1}$

Definitions.

$R_1 - \frac{N_1 \cdot N_4 + N_2 \cdot N_3}{N_1} = 0$

$N_1 - \frac{1}{A} = 0$     $N_2 - \frac{1}{B} = 0$     $N_3 - \frac{1}{C} = 0$     $N_4 - \frac{1}{D} = 0$

$R_1 - \frac{(A \cdot D + B \cdot C)}{B \cdot C \cdot D} = 0$     $R_2 - \frac{B \cdot C \cdot D}{(A \cdot D + B \cdot C)} = 0$



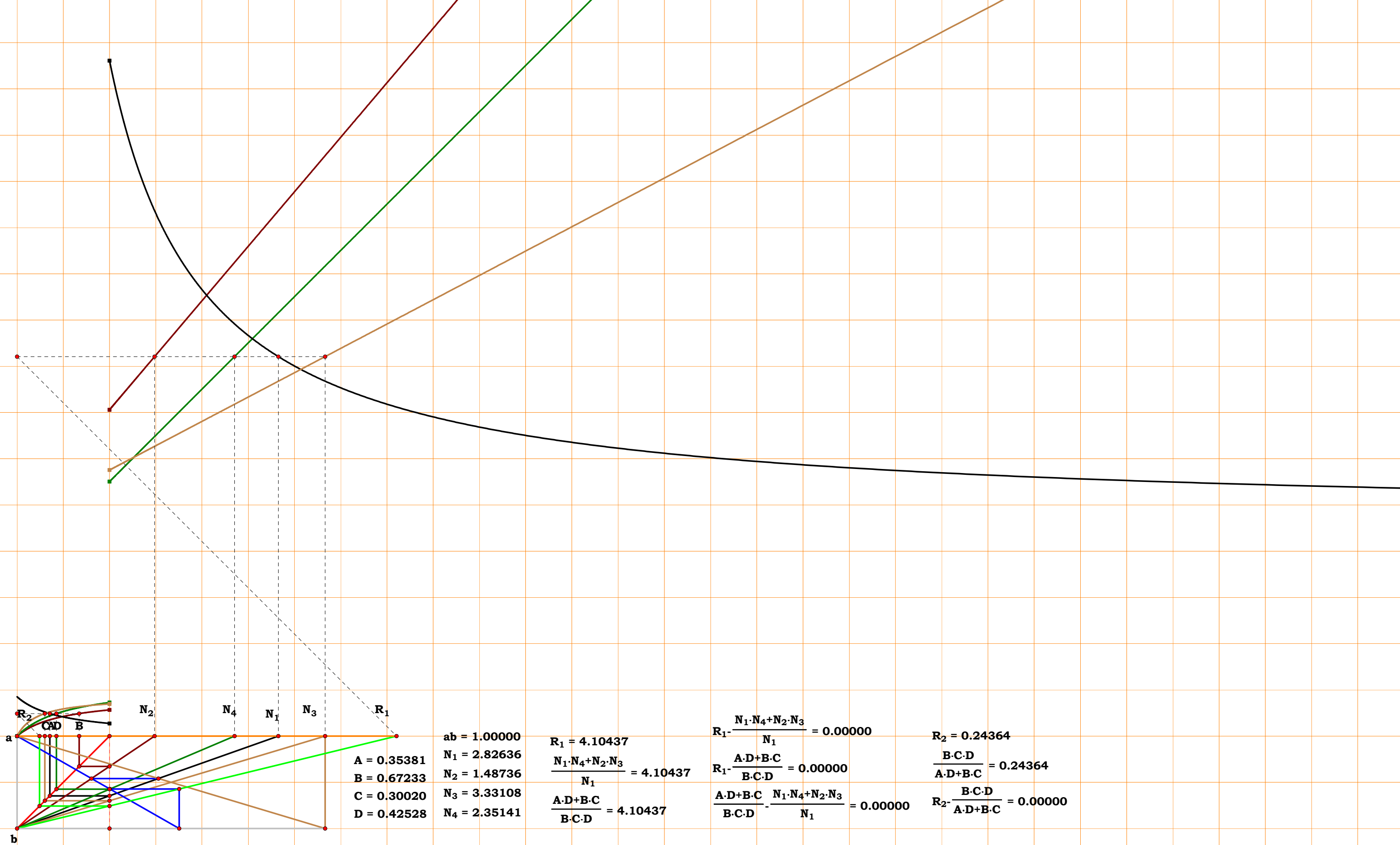
$ab = 1.00000$     $R_1 = 3.73846$   
 $A = 0.35381$     $N_1 = 2.82636$     $\frac{N_1 \cdot N_4 + N_2 \cdot N_3}{N_1} = 3.73846$   
 $B = 0.67233$     $N_2 = 1.48736$   
 $C = 0.30020$     $N_3 = 3.33108$     $\frac{A \cdot D + B \cdot C}{B \cdot C \cdot D} = 3.73846$   
 $D = 0.50365$     $N_4 = 1.98549$

$R_1 - \frac{N_1 \cdot N_4 + N_2 \cdot N_3}{N_1} = 0.00000$

$R_1 - \frac{A \cdot D + B \cdot C}{B \cdot C \cdot D} = 0.00000$

$\frac{A \cdot D + B \cdot C}{B \cdot C \cdot D} - \frac{N_1 \cdot N_4 + N_2 \cdot N_3}{N_1} = 0.00000$

$R_2 = 0.26749$   
 $\frac{B \cdot C \cdot D}{A \cdot D + B \cdot C} = 0.26749$   
 $R_2 - \frac{B \cdot C \cdot D}{A \cdot D + B \cdot C} = 0.00000$



**1CST5R14**

**Unit.  $\mathbf{ab} := 1 \quad \mathbf{N}_1 := 3.62533$**

$$\mathbf{N}_2 := 1.54382 \quad \mathbf{N}_3 := 2.14860$$
$$N_4 := 2.35090 \quad N_5 := 1.78498$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3} \quad \mathbf{D} := \frac{1}{N_4} \quad \mathbf{E} := \frac{1}{N_5}$$

$$\mathbf{cd} := \frac{\mathbf{N}_3}{\mathbf{N}_1 + \mathbf{N}_3} \quad \mathbf{bd} := \mathbf{N}_2 \cdot \mathbf{cd}$$

$$\mathbf{bg} := \frac{\mathbf{bd}}{1 - \mathbf{cd}} \qquad \mathbf{ef} := \frac{\mathbf{bg}}{\mathbf{bg} + \mathbf{N}_4}$$

$$\mathbf{bj} := \mathbf{N}_5 \cdot (1 - \mathbf{ef}) \quad \mathbf{R}_1 := \frac{\mathbf{bj}}{\mathbf{ef}}$$

$$\mathbf{R}_1 = 4.586304 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$

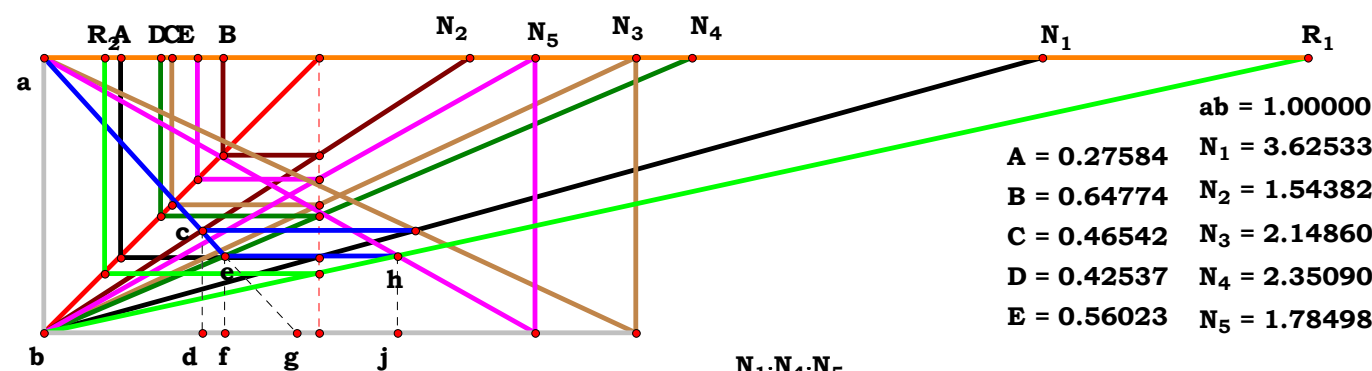
### Definitions.

$$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_2 \cdot N_3} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0$$

$$\mathbf{N}_3 - \frac{1}{\mathbf{C}} = 0 \quad \mathbf{N}_4 - \frac{1}{\mathbf{D}} = 0 \quad \mathbf{N}_5 - \frac{1}{\mathbf{E}} = 0$$

$$R_1 - \frac{B \cdot C}{A \cdot D \cdot E} = 0 \quad R_2 - \frac{A \cdot D \cdot E}{B \cdot C} = 0$$



**A = 0.27584**

**B = 0.64774**

**C = 0.46542**

**D = 0.42537**

$$E = 0.56023$$

**ab = 1.00000**

$$N_1 = 3.62533$$

$$N_0 = 1.54382$$

**N<sub>2</sub> = 2 14860**

**N<sub>3</sub> = 2.14800**

$$N_4 = 2.35090$$

$$N_5 = 1.78498$$

$$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_2 \cdot N_3} = 0.00000$$

$$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_2 \cdot N_3} = 0.00000$$

$$\frac{B.C}{A.D.E} - \frac{N_1.N_4.N_5}{N_2.N_3} = 0.00000$$

$$R_2 = 0.21804$$

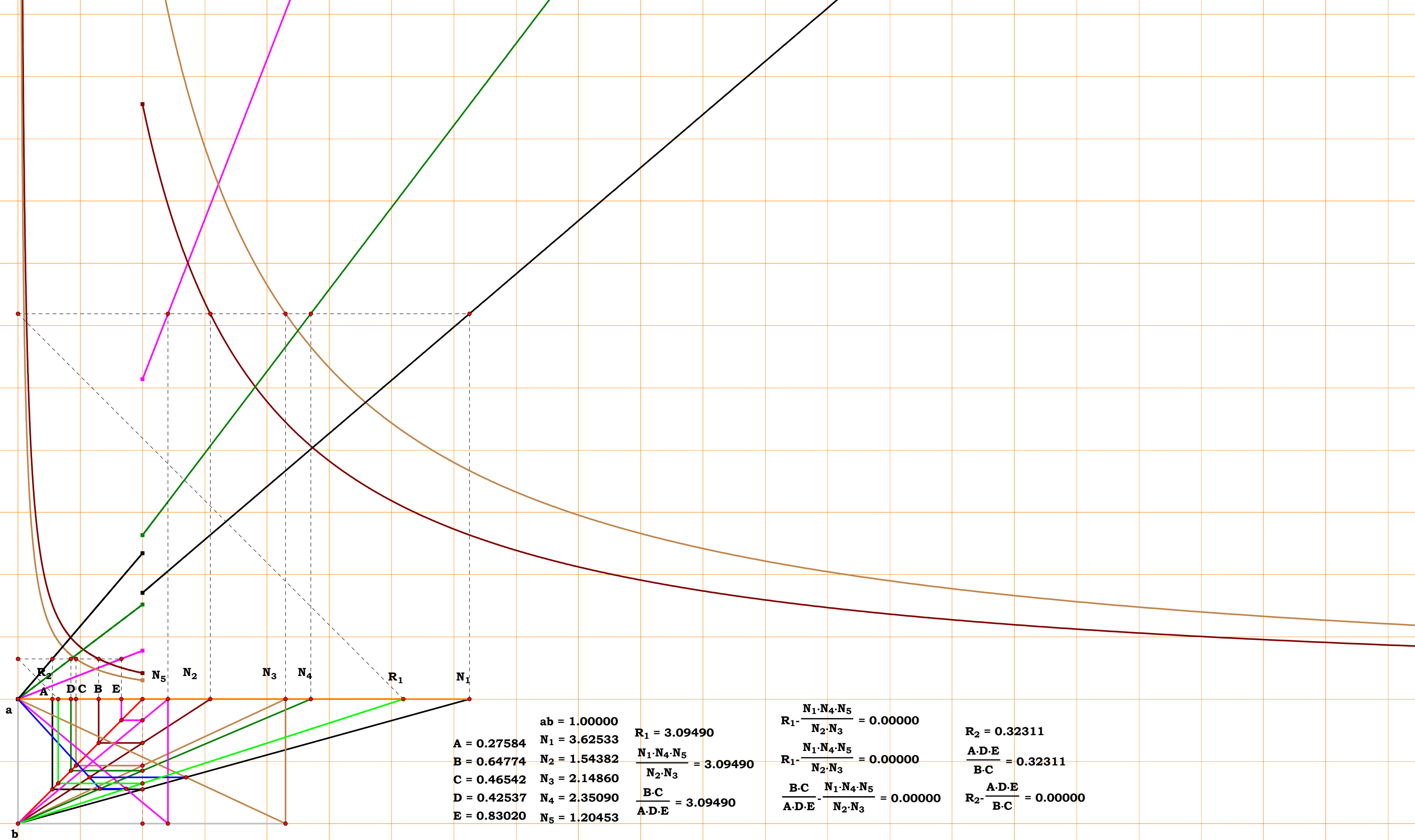
$$\frac{A \cdot D \cdot E}{B \cdot C} = 0.21804$$

$$R_2 - \frac{A \cdot D \cdot E}{B \cdot C} = 0.00000$$

$$R_1 = 4.58628$$

$$\frac{N_1 \cdot N_4 \cdot N_5}{N_2 \cdot N_3} = 4.58628$$

$$\frac{B.C}{A.D.E} = 4.58628$$



$ab = 1.00000$   
 $A = 0.27584$   $N_1 = 3.62533$   
 $B = 0.64774$   $N_2 = 1.54382$   
 $C = 0.46542$   $N_3 = 2.14860$   
 $D = 0.42537$   $N_4 = 2.35090$   
 $E = 0.83020$   $N_5 = 1.20453$

$$R_1 = 3.09490$$

$$\frac{N_1 \cdot N_4 \cdot N_5}{N_2 \cdot N_3} = 3.09490$$

$$\frac{B \cdot C}{A \cdot D \cdot E} = 3.09490$$

$$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_2 \cdot N_3} = 0.00000$$

$$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_2 \cdot N_3} = 0.00000$$

$$\frac{B \cdot C}{A \cdot D \cdot E} - \frac{N_1 \cdot N_4 \cdot N_5}{N_2 \cdot N_3} = 0.00000$$

$$R_2 = 0.32311$$

$$\frac{A \cdot D \cdot E}{B \cdot C} = 0.32311$$

$$R_2 - \frac{A \cdot D \cdot E}{B \cdot C} = 0.00000$$



1CST6R0

Given.

Unit.  $AB := 1$   $N_1 := 4.21484$

$N_2 := 3.31553$   $N_3 := 1.32073$

$N_4 := 2.25490$   $N_5 := 3.77387$

$A := \frac{1}{N_1}$   $B := \frac{1}{N_2}$   $C := \frac{1}{N_3}$   $D := \frac{1}{N_4}$   $E := \frac{1}{N_5}$

Descriptions.

$CD := 1 - \frac{N_2}{N_1}$   $AC := N_3 \cdot (1 - CD)$

$BH := \frac{AC}{CD}$   $EF := \frac{BH}{BH + N_4}$

$BG := N_5 \cdot (1 - EF)$   $R_1 := \frac{BG}{EF}$

$R_1 = 1.747659$   $R_2 := \frac{1}{R_1}$

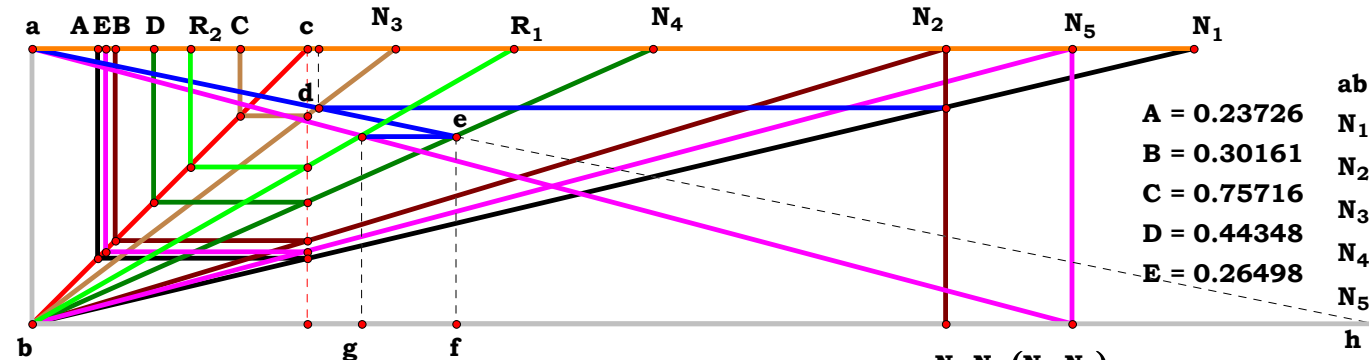
Definitions.

$$R_1 - \frac{N_4 \cdot N_5 \cdot (N_1 - N_2)}{N_2 \cdot N_3} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0$$

$$N_3 - \frac{1}{C} = 0 \quad N_4 - \frac{1}{D} = 0 \quad N_5 - \frac{1}{E} = 0$$

$$R_1 - \frac{C \cdot (B - A)}{A \cdot D \cdot E} = 0 \quad R_2 - \frac{A \cdot D \cdot E}{C \cdot (B - A)} = 0$$



$ab = 1.00000$   
 $N_1 = 4.21484$   
 $N_2 = 3.31553$   
 $N_3 = 1.32073$   
 $N_4 = 2.25490$   
 $N_5 = 3.77387$   
 $A = 0.23726$   
 $B = 0.30161$   
 $C = 0.75716$   
 $D = 0.44348$   
 $E = 0.26498$   
 $R_1 = 1.74766$   
 $\frac{N_4 \cdot N_5 \cdot (N_1 - N_2)}{N_2 \cdot N_3} = 1.74766$   
 $\frac{(C \cdot (B - A))}{(A \cdot D \cdot E)} = 1.74766$

$$R_1 - \frac{N_4 \cdot N_5 \cdot (N_1 - N_2)}{N_2 \cdot N_3} = 0.00000$$

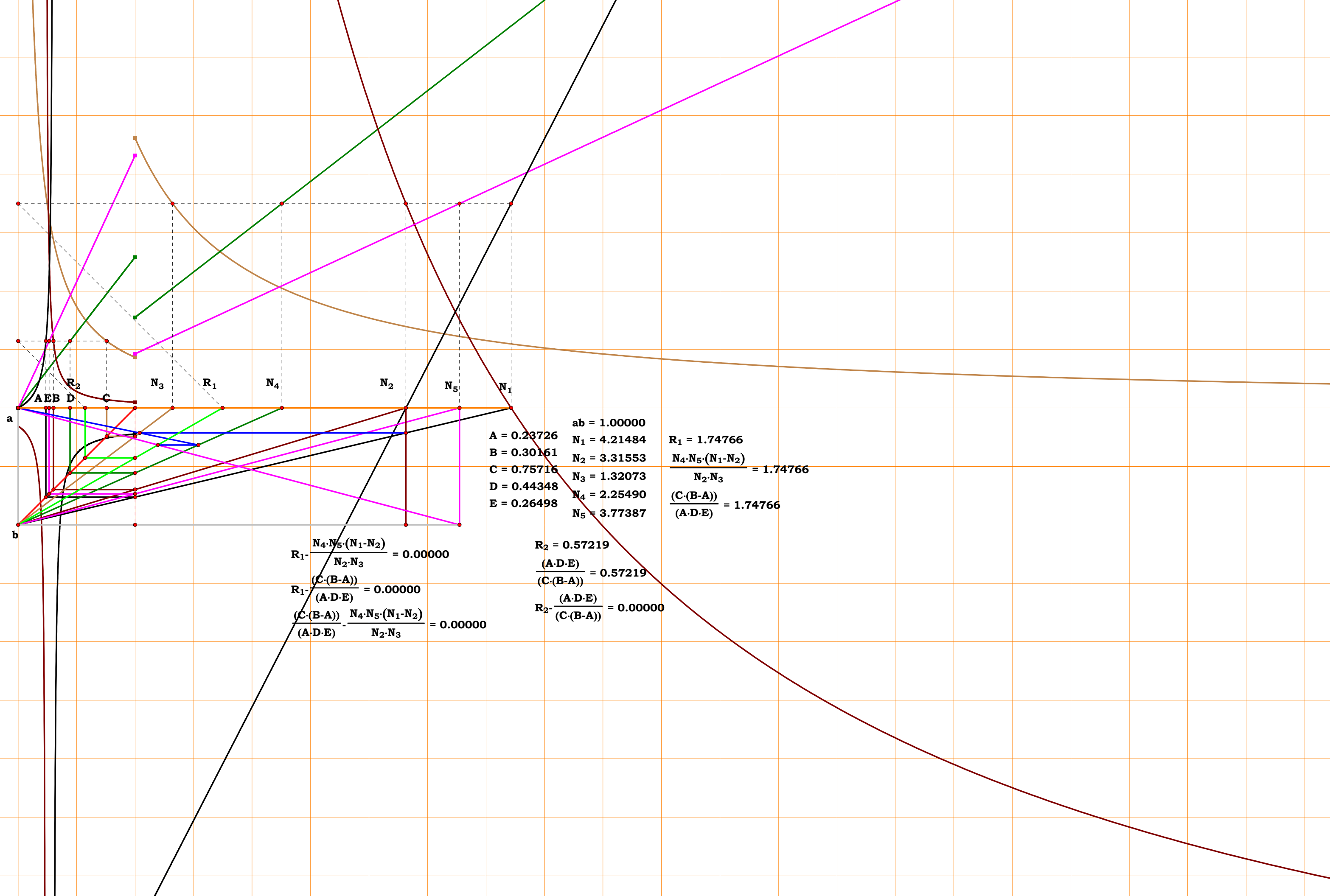
$$R_1 - \frac{(C \cdot (B - A))}{(A \cdot D \cdot E)} = 0.00000$$

$$\frac{(C \cdot (B - A))}{(A \cdot D \cdot E)} - \frac{N_4 \cdot N_5 \cdot (N_1 - N_2)}{N_2 \cdot N_3} = 0.00000$$

$$R_2 = 0.57219$$

$$\frac{(A \cdot D \cdot E)}{(C \cdot (B - A))} = 0.57219$$

$$R_2 - \frac{(A \cdot D \cdot E)}{(C \cdot (B - A))} = 0.00000$$



a

b

AEB D

N<sub>3</sub>

R<sub>1</sub>

N<sub>4</sub>

N<sub>2</sub>

N<sub>5</sub>

N<sub>1</sub>

ab = 1.00000  
A = 0.23726 N<sub>1</sub> = 4.21484  
B = 0.30161 N<sub>2</sub> = 3.31553  
C = 0.75716 N<sub>3</sub> = 1.32073  
D = 0.44348 N<sub>4</sub> = 2.25490  
E = 0.26498 N<sub>5</sub> = 3.77387

R<sub>1</sub> = 1.74766  
 $\frac{N_4 \cdot N_5 \cdot (N_1 - N_2)}{N_2 \cdot N_3} = 1.74766$   
 $\frac{(C \cdot (B - A))}{(A \cdot D \cdot E)} = 1.74766$

$R_1 - \frac{N_4 \cdot N_5 \cdot (N_1 - N_2)}{N_2 \cdot N_3} = 0.00000$   
 $R_1 - \frac{(C \cdot (B - A))}{(A \cdot D \cdot E)} = 0.00000$   
 $\frac{(C \cdot (B - A))}{(A \cdot D \cdot E)} - \frac{N_4 \cdot N_5 \cdot (N_1 - N_2)}{N_2 \cdot N_3} = 0.00000$

R<sub>2</sub> = 0.57219  
 $\frac{(A \cdot D \cdot E)}{(C \cdot (B - A))} = 0.57219$   
 $R_2 - \frac{(A \cdot D \cdot E)}{(C \cdot (B - A))} = 0.00000$





1CST6R1

Given.

Unit.  $AB := 1$   $N_1 := 2.74995$

$N_2 := 2.37444$   $N_3 := 1.73340$   $N_4 := 6.29146$

$N_5 := 1.99656$   $N_6 := 4.59329$   $N_7 := 3.39704$

$A := \frac{1}{N_1}$   $B := \frac{1}{N_2}$   $C := \frac{1}{N_3}$   $D := \frac{1}{N_4}$   $E := \frac{1}{N_5}$   $F := \frac{1}{N_6}$   $G := \frac{1}{N_7}$

Descriptions.

$GH := \frac{N_2}{N_1 + N_2}$   $BD := N_3 \cdot GH$   $BJ := \frac{BD}{1 - GH}$

$EF := \frac{BJ}{BJ + N_4}$   $BM := N_5 \cdot (1 - EF)$   $BQ := \frac{BM \cdot GH}{EF}$

$OQ := \frac{BQ}{N_6}$   $R_1 := \frac{N_7}{OQ}$

$R_1 = 4.012425$   $R_2 := \frac{1}{R_1}$

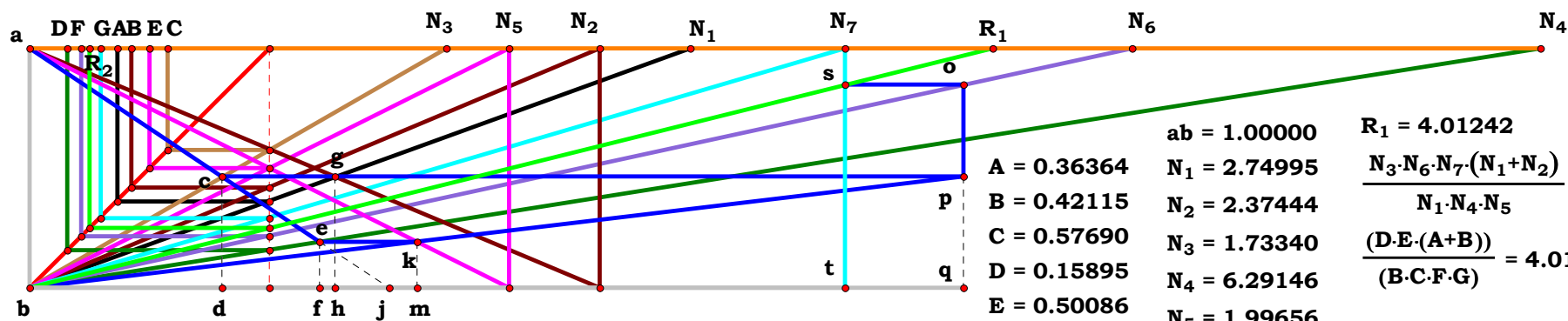
Definitions.

$R_1 - \frac{N_3 \cdot N_6 \cdot N_7 \cdot (N_1 + N_2)}{N_1 \cdot N_4 \cdot N_5} = 0$

$N_1 - \frac{1}{A} = 0$   $N_2 - \frac{1}{B} = 0$   $N_3 - \frac{1}{C} = 0$   $N_4 - \frac{1}{D} = 0$

$N_5 - \frac{1}{E} = 0$   $N_6 - \frac{1}{F} = 0$   $N_7 - \frac{1}{G} = 0$

$R_1 - \frac{D \cdot E \cdot (A + B)}{B \cdot C \cdot F \cdot G} = 0$   $R_2 - \frac{B \cdot C \cdot F \cdot G}{D \cdot E \cdot (A + B)} = 0$



$$R_1 - \frac{N_3 \cdot N_6 \cdot N_7 \cdot (N_1 + N_2)}{N_1 \cdot N_4 \cdot N_5} = 0.00000$$

$$R_1 - \frac{(D \cdot E \cdot (A + B))}{(B \cdot C \cdot F \cdot G)} = 0.00000$$

$$\frac{(D \cdot E \cdot (A + B))}{(B \cdot C \cdot F \cdot G)} - \frac{N_3 \cdot N_6 \cdot N_7 \cdot (N_1 + N_2)}{N_1 \cdot N_4 \cdot N_5} = 0.00000$$

A = 0.36364  
B = 0.42115  
C = 0.57690  
D = 0.15895  
E = 0.50086  
F = 0.21771  
G = 0.29437

ab = 1.00000  
N<sub>1</sub> = 2.74995  
N<sub>2</sub> = 2.37444  
N<sub>3</sub> = 1.73340  
N<sub>4</sub> = 6.29146  
N<sub>5</sub> = 1.99656  
N<sub>6</sub> = 4.59329  
N<sub>7</sub> = 3.39704

$$R_1 = 4.01242$$

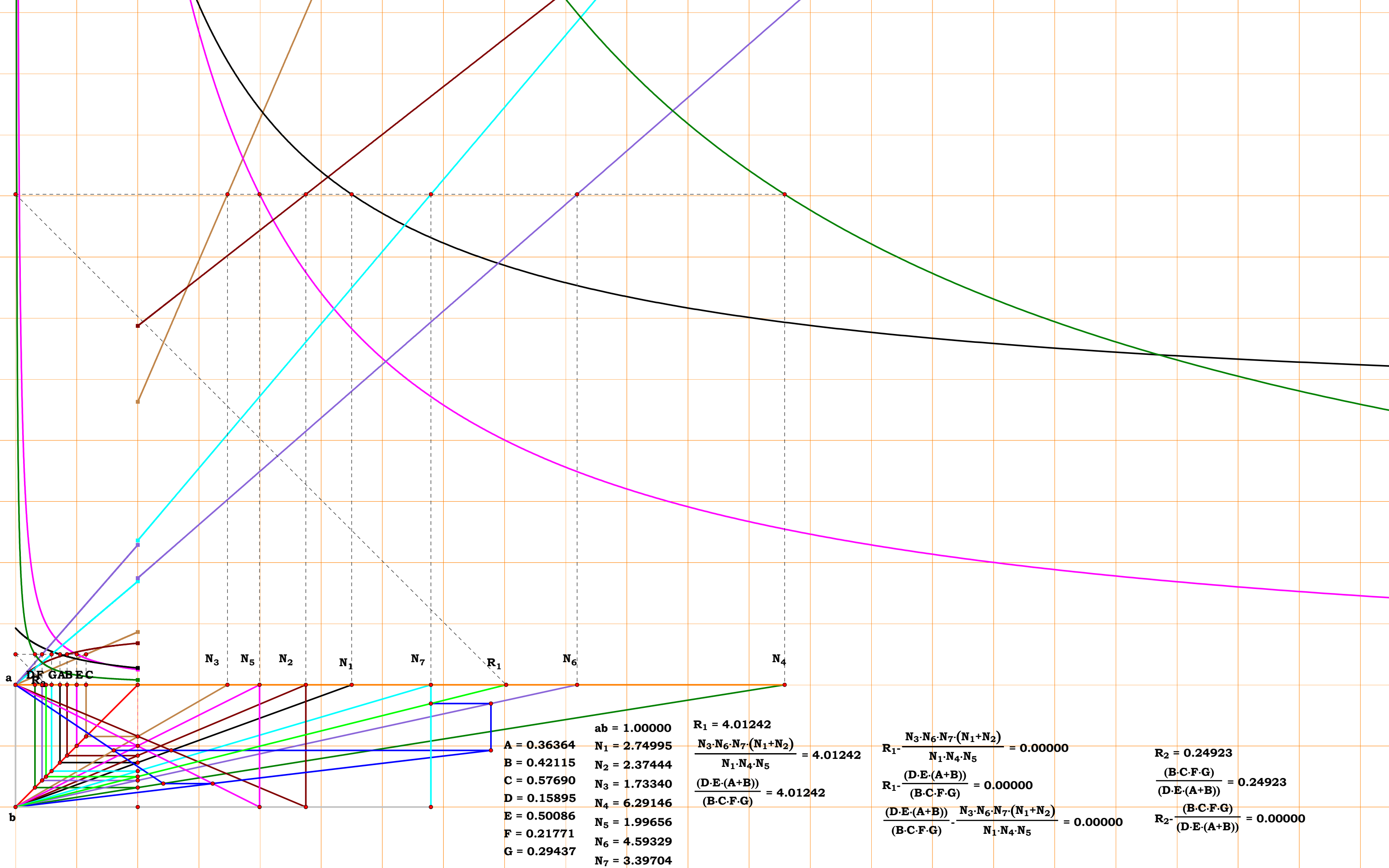
$$\frac{N_3 \cdot N_6 \cdot N_7 \cdot (N_1 + N_2)}{N_1 \cdot N_4 \cdot N_5} = 4.01242$$

$$\frac{(D \cdot E \cdot (A + B))}{(B \cdot C \cdot F \cdot G)} = 4.01242$$

$$R_2 = 0.24923$$

$$\frac{(B \cdot C \cdot F \cdot G)}{(D \cdot E \cdot (A + B))} = 0.24923$$

$$R_2 - \frac{(B \cdot C \cdot F \cdot G)}{(D \cdot E \cdot (A + B))} = 0.00000$$





1CST6R2

Given.

Unit.  $AB := 1$   $N_1 := 3.65886$

$N_2 := 3.02367$   $N_3 := 2.28849$

$N_4 := 4.44602$   $N_5 := 1.55690$   $N_6 := 1.73798$

$A := \frac{1}{N_1}$   $B := \frac{1}{N_2}$   $C := \frac{1}{N_3}$   $D := \frac{1}{N_4}$   $E := \frac{1}{N_5}$   $F := \frac{1}{N_6}$

Descriptions.

$HJ := \frac{N_2}{N_1 + N_2}$   $BE := N_3 \cdot HJ$

$DE := \frac{BE}{N_4}$   $BG := \frac{BE}{1 - DE}$

$FG := \frac{BG}{N_5}$   $R_1 := \frac{N_6}{FG}$

$R_1 = 2.004539$   $R_2 := \frac{1}{R_1}$

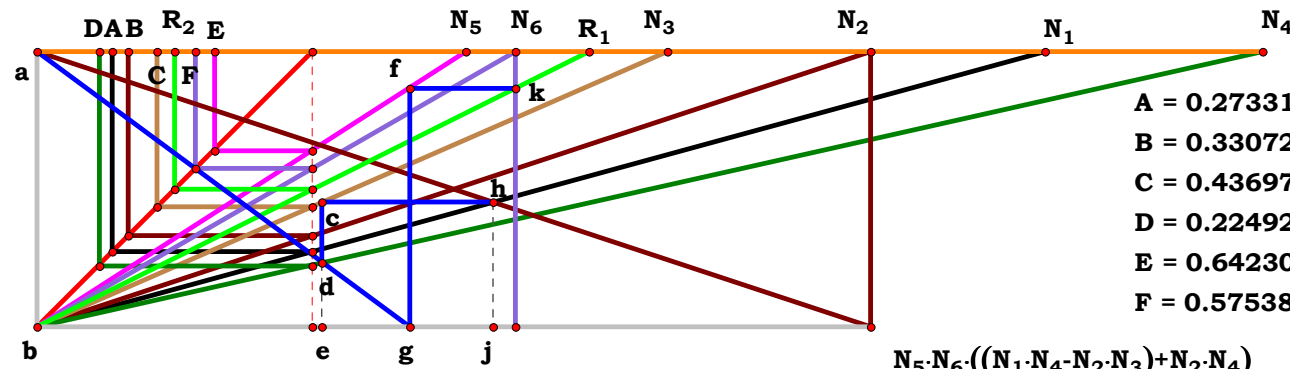
Definitions.

$$R_1 - \frac{N_5 \cdot N_6 \cdot (N_1 \cdot N_4 - N_2 \cdot N_3 + N_2 \cdot N_4)}{N_2 \cdot N_3 \cdot N_4} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$N_4 - \frac{1}{D} = 0 \quad N_5 - \frac{1}{E} = 0 \quad N_6 - \frac{1}{F} = 0$$

$$R_1 - \frac{(A \cdot C - A \cdot D + B \cdot C)}{A \cdot E \cdot F} = 0 \quad R_2 - \frac{A \cdot E \cdot F}{(A \cdot C - A \cdot D + B \cdot C)} = 0$$



$A = 0.27331$   
 $B = 0.33072$   
 $C = 0.43697$   
 $D = 0.22492$   
 $E = 0.64230$   
 $F = 0.57538$

$ab = 1.00000$   
 $N_1 = 3.65886$   
 $N_2 = 3.02367$   
 $N_3 = 2.28849$   
 $N_4 = 4.44602$   
 $N_5 = 1.55690$   
 $N_6 = 1.73798$

$$R_1 - \frac{N_5 \cdot N_6 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_2 \cdot N_4)}{N_2 \cdot N_3 \cdot N_4} = 0.00000$$

$$R_1 - \frac{((A \cdot C - A \cdot D) + B \cdot C)}{(A \cdot E \cdot F)} = 0.00000$$

$$\frac{((A \cdot C - A \cdot D) + B \cdot C)}{(A \cdot E \cdot F)} - \frac{N_5 \cdot N_6 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_2 \cdot N_4)}{N_2 \cdot N_3 \cdot N_4} = 0.00000$$

$$R_1 = 2.00454$$

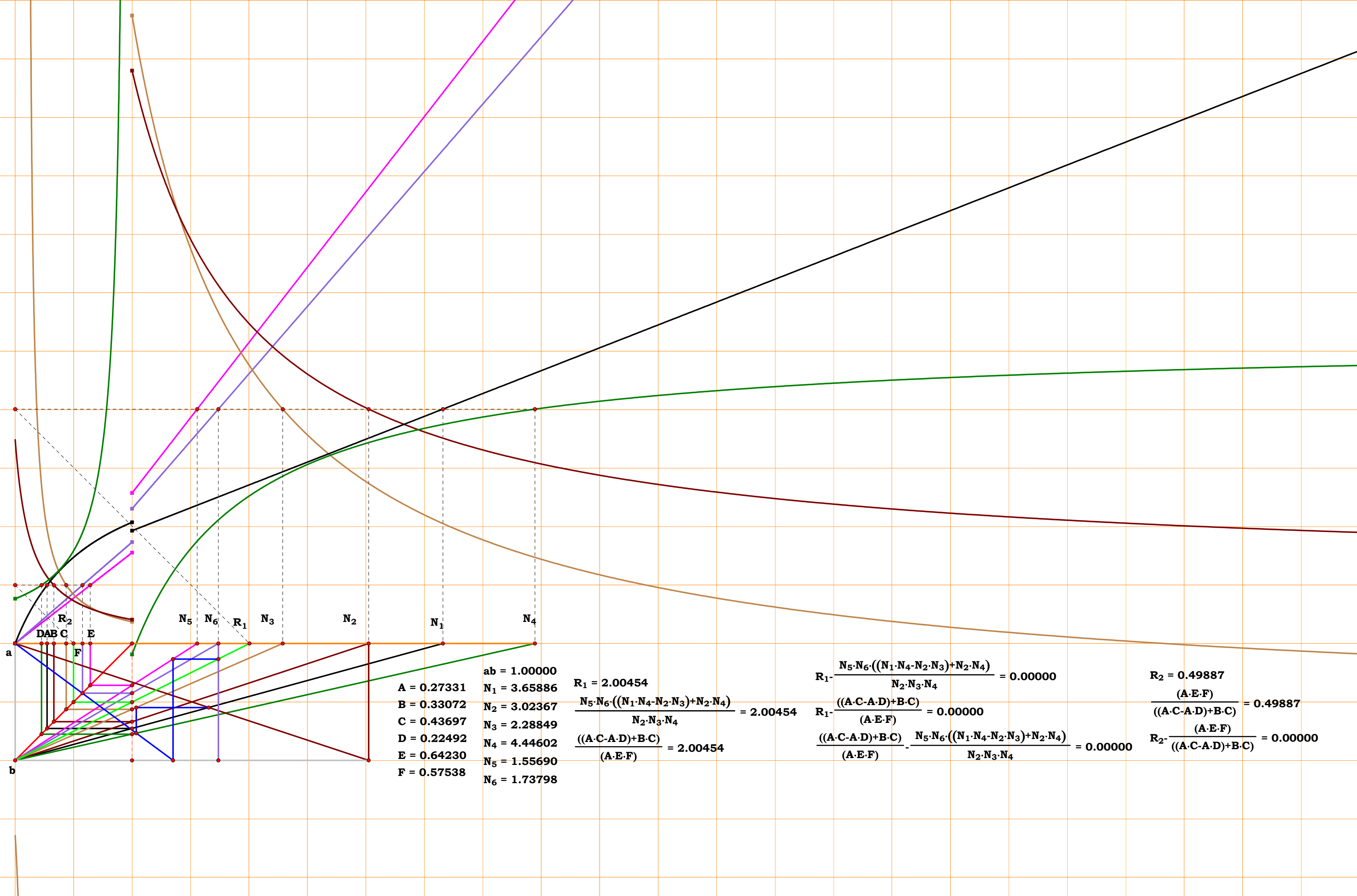
$$\frac{N_5 \cdot N_6 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_2 \cdot N_4)}{N_2 \cdot N_3 \cdot N_4} = 2.00454$$

$$\frac{((A \cdot C - A \cdot D) + B \cdot C)}{(A \cdot E \cdot F)} = 2.00454$$

$$R_2 = 0.49887$$

$$\frac{(A \cdot E \cdot F)}{((A \cdot C - A \cdot D) + B \cdot C)} = 0.49887$$

$$R_2 - \frac{(A \cdot E \cdot F)}{((A \cdot C - A \cdot D) + B \cdot C)} = 0.00000$$



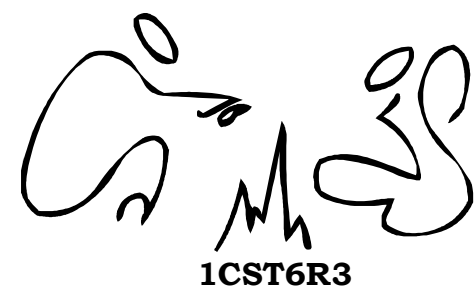
**A = 0.27331**  
**B = 0.33072**  
**C = 0.43697**  
**D = 0.22492**  
**E = 0.64230**  
**F = 0.57538**

**ab = 1.00000**  
**N<sub>1</sub> = 3.65886**  
**N<sub>2</sub> = 3.02367**  
**N<sub>3</sub> = 2.28849**  
**N<sub>4</sub> = 4.44602**  
**N<sub>5</sub> = 1.55690**  
**N<sub>6</sub> = 1.73798**

$$R_1 = 2.00454$$
$$\frac{N_5 \cdot N_6 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_2 \cdot N_4)}{N_2 \cdot N_3 \cdot N_4} = 2.00454$$
$$\frac{((A \cdot C - A \cdot D) + B \cdot C)}{(A \cdot E \cdot F)} = 2.00454$$

$$R_1 - \frac{N_5 \cdot N_6 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_2 \cdot N_4)}{N_2 \cdot N_3 \cdot N_4} = 0.00000$$
$$R_1 - \frac{((A \cdot C - A \cdot D) + B \cdot C)}{(A \cdot E \cdot F)} = 0.00000$$
$$\frac{((A \cdot C - A \cdot D) + B \cdot C)}{(A \cdot E \cdot F)} - \frac{N_5 \cdot N_6 \cdot ((N_1 \cdot N_4 - N_2 \cdot N_3) + N_2 \cdot N_4)}{N_2 \cdot N_3 \cdot N_4} = 0.00000$$

$$R_2 = 0.49887$$
$$\frac{(A \cdot E \cdot F)}{((A \cdot C - A \cdot D) + B \cdot C)} = 0.49887$$
$$R_2 - \frac{(A \cdot E \cdot F)}{((A \cdot C - A \cdot D) + B \cdot C)} = 0.00000$$



Given.

Unit.  $AB := 1$     $N_1 := 3.46311$   
 $N_2 := 2.49050$     $N_3 := 2.10571$     $N_4 := 1.82428$

$A := \frac{1}{N_1}$     $B := \frac{1}{N_2}$     $C := \frac{1}{N_3}$     $D := \frac{1}{N_4}$

Descriptions.

$BF := \frac{N_1 \cdot N_4}{N_1 + N_4}$     $CD := \frac{N_3 - BF}{N_3}$     $R_1 := \frac{N_2}{1 - CD}$

$R_1 = 4.389031$     $R_2 := \frac{1}{R_1}$

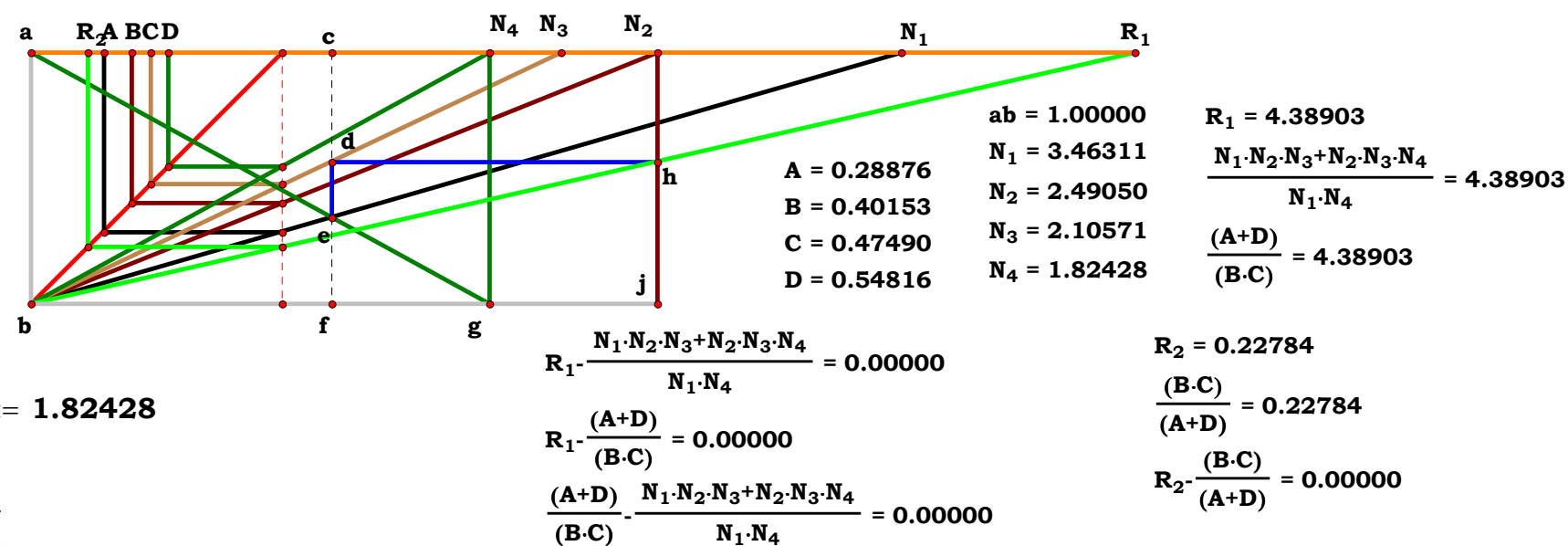
Definitions.

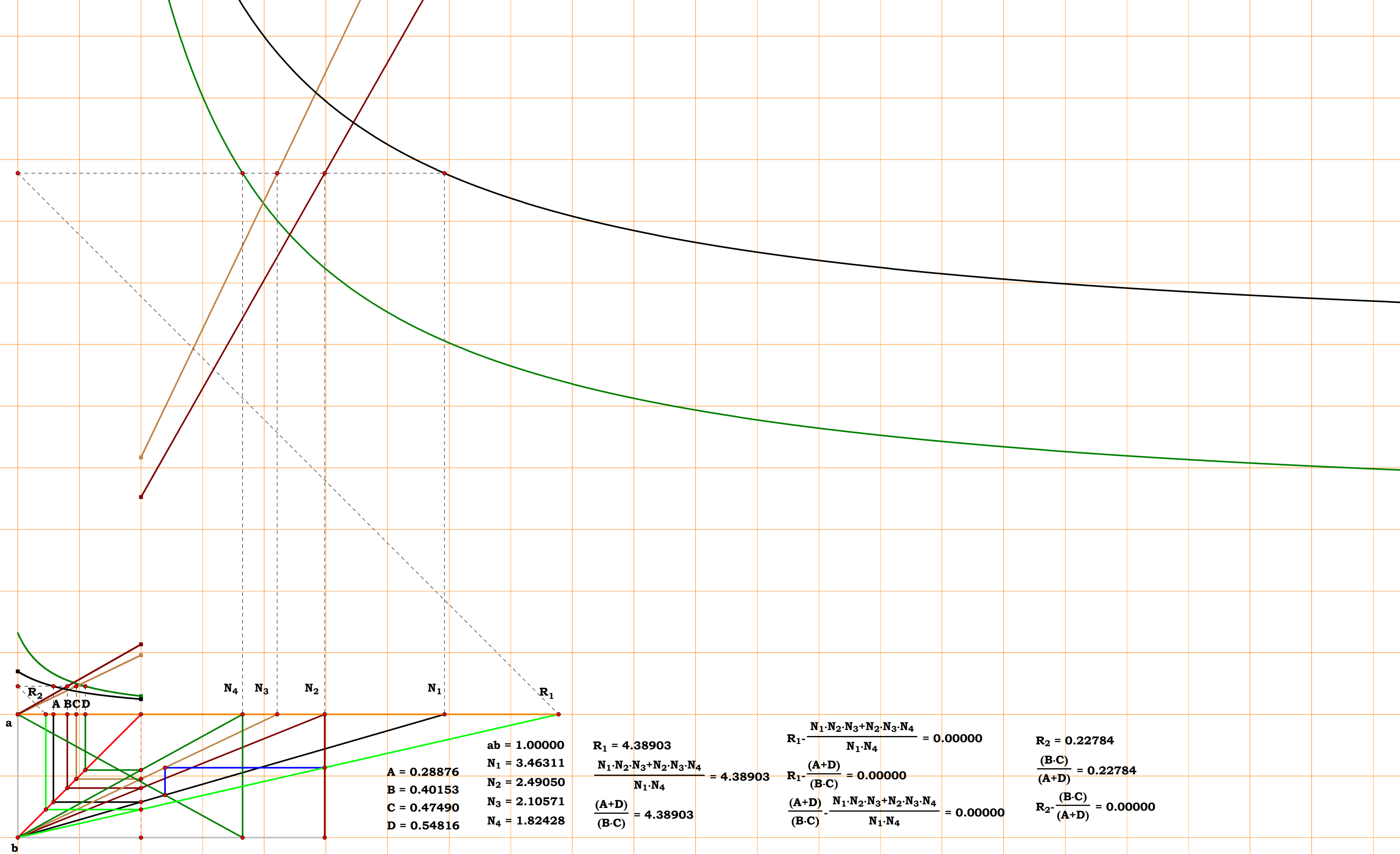
$R_1 - \frac{N_1 \cdot N_2 \cdot N_3 + N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4} = 0$

$N_1 - \frac{1}{A} = 0$     $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$     $N_4 - \frac{1}{D} = 0$

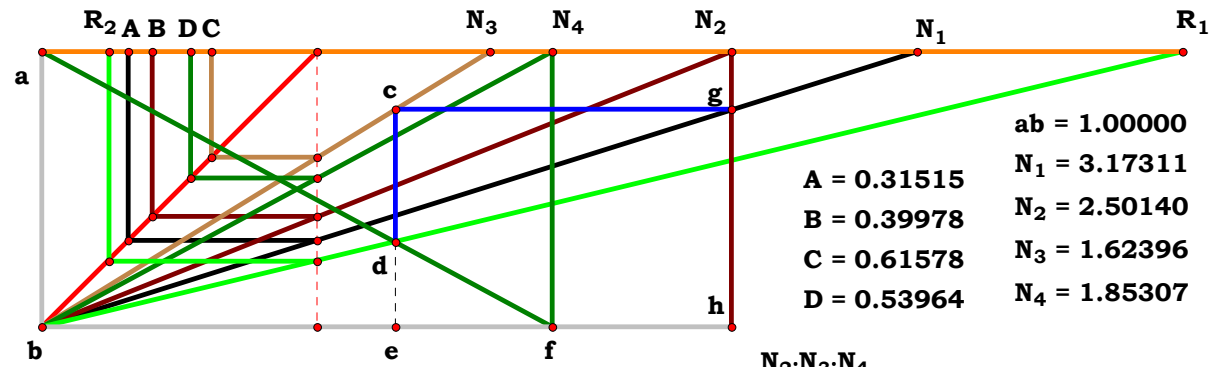
$R_1 - \frac{(A+D)}{B \cdot C} = 0$     $R_2 - \frac{B \cdot C}{(A+D)} = 0$





**1CST6R4**

**Unit.**  $\mathbf{AB} := 1 \quad \mathbf{N}_1 := 3.17311$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3} \quad \mathbf{D} := \frac{1}{N_4}$$
$$\mathbf{GH} := \frac{\mathbf{N}_2}{\mathbf{N}_1} \quad \mathbf{BE} := \mathbf{N}_3 \cdot \mathbf{GH}$$
$$\mathbf{DE} := \frac{\mathbf{N}_4 - \mathbf{BE}}{\mathbf{N}_4} \quad \mathbf{R}_1 := \frac{\mathbf{BE}}{\mathbf{DE}}$$
$$\mathbf{R}_1 = 4.140941 \quad \mathbf{R}_2 := \frac{1}{\mathbf{R}_1}$$
$$R_1 - \frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_2 \cdot N_3} = 0$$
$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0$$
$$N_3 - \frac{1}{C} = 0 \quad N_4 - \frac{1}{D} = 0$$
$$R_1 - \frac{A}{B \cdot C - A \cdot D} = 0 \quad R_2 - \frac{B \cdot C - A \cdot D}{A} = 0$$


$$R_1 - \frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_2 \cdot N_3} = 0.00000$$

$$R_1 - \frac{A}{(B \cdot C - A \cdot D)} = 0.00000$$

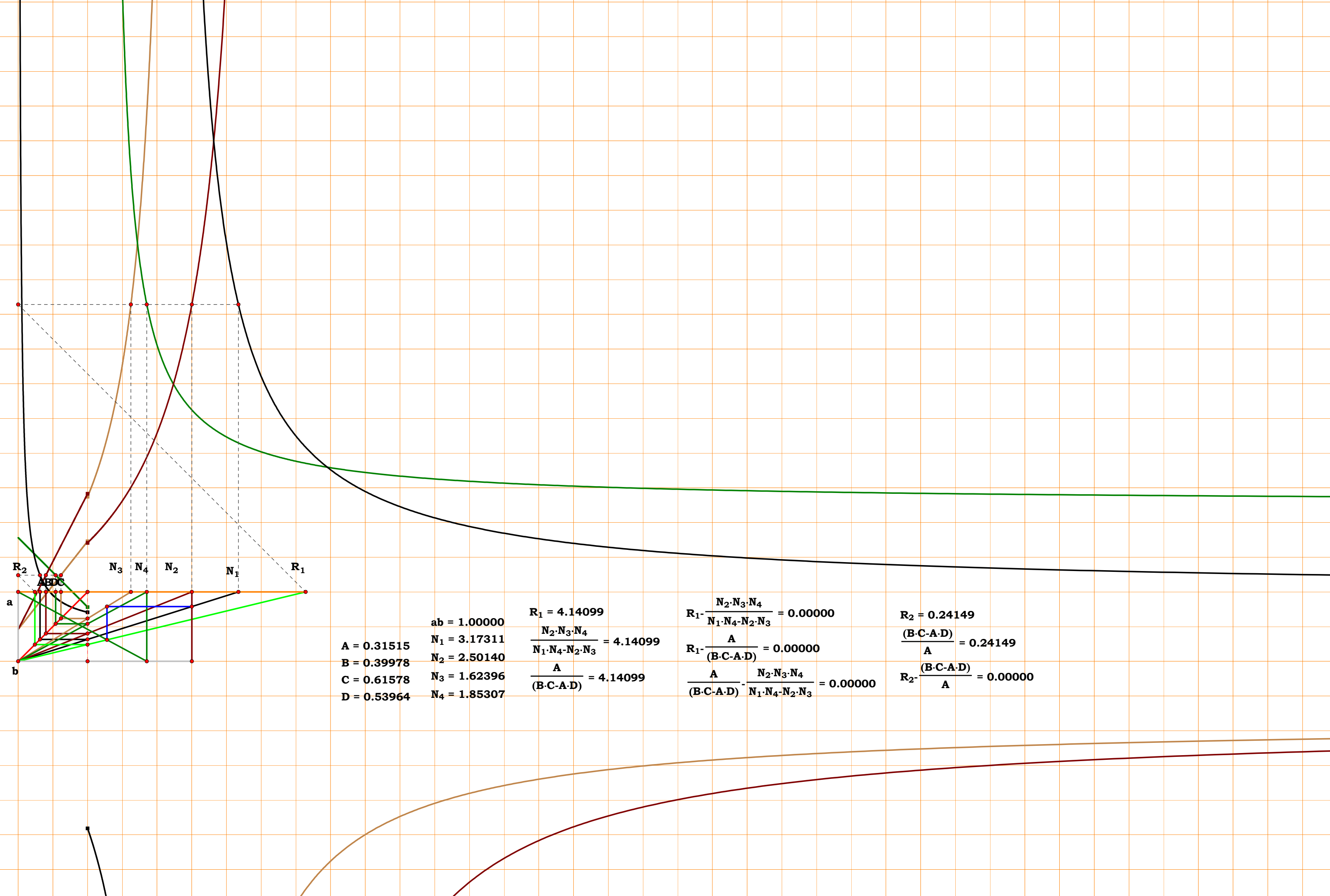
$$\frac{A}{(B \cdot C - A \cdot D)} - \frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_2 \cdot N_3} = 0.00000$$

$$\frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_2 \cdot N_3} = 4.14099$$

$$\frac{A}{(B \cdot C - A \cdot D)} = 4.14099$$

$$\frac{(B \cdot C - A \cdot D)}{A} = 0.24149$$

$$R_2 - \frac{(B \cdot C - A \cdot D)}{A} = 0.00000$$



**A = 0.31515**  
**B = 0.39978**  
**C = 0.61578**  
**D = 0.53964**

**ab = 1.00000**  
**N<sub>1</sub> = 3.17311**  
**N<sub>2</sub> = 2.50140**  
**N<sub>3</sub> = 1.62396**  
**N<sub>4</sub> = 1.85307**

**R<sub>1</sub> = 4.14099**  
$$\frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 \cdot N_2 \cdot N_3} = 4.14099$$
$$\frac{A}{(B \cdot C \cdot A \cdot D)} = 4.14099$$

$$R_1 - \frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 \cdot N_2 \cdot N_3} = 0.00000$$
$$R_1 - \frac{A}{(B \cdot C \cdot A \cdot D)} = 0.00000$$
$$\frac{A}{(B \cdot C \cdot A \cdot D)} - \frac{N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 \cdot N_2 \cdot N_3} = 0.00000$$

**R<sub>2</sub> = 0.24149**  
$$\frac{(B \cdot C \cdot A \cdot D)}{A} = 0.24149$$
$$R_2 - \frac{(B \cdot C \cdot A \cdot D)}{A} = 0.00000$$





1CST6R5

Given.

Unit.  $ab := 1$      $N_1 := 3.05078$

$N_2 := 2.40088$      $N_3 := 2.07026$

$N_4 := 3.69504$      $N_5 := 1.47901$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$      $D := \frac{1}{N_4}$      $E := \frac{1}{N_5}$

Descriptions.

$hj := \frac{N_2}{N_1 + N_2}$      $bd := N_3 \cdot hj$      $bg := \frac{bd}{1 - hj}$

$ef := \frac{bg}{bg + N_4}$      $R_1 := \frac{N_5}{ef}$

$R_1 = 4.83334$      $R_2 := \frac{1}{R_1}$

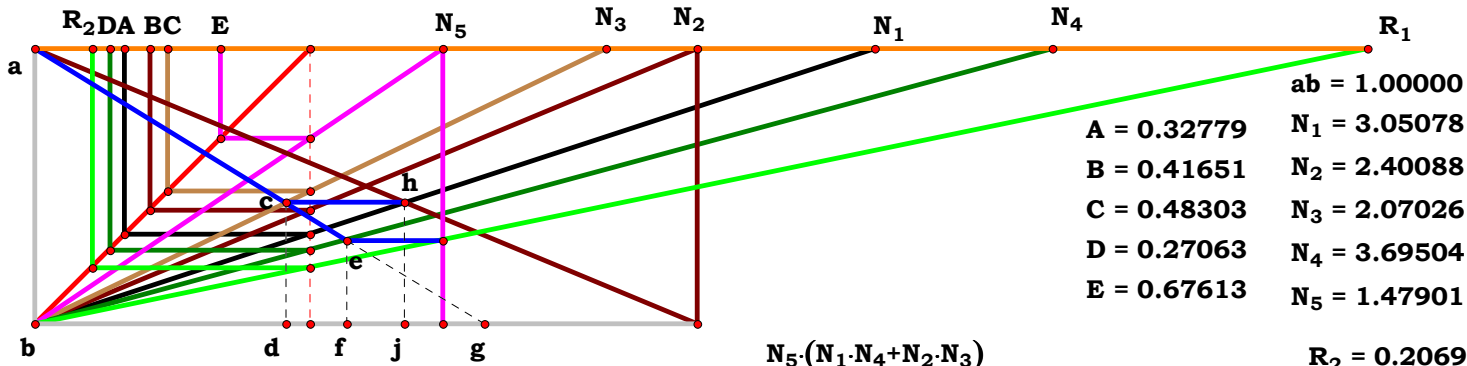
Definitions.

$R_1 - \frac{N_5 \cdot (N_1 \cdot N_4 + N_2 \cdot N_3)}{N_2 \cdot N_3} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$      $N_4 - \frac{1}{D} = 0$      $N_5 - \frac{1}{E} = 0$

$R_1 - \frac{(A \cdot D + B \cdot C)}{A \cdot E \cdot D} = 0$      $R_2 - \frac{A \cdot E \cdot D}{(A \cdot D + B \cdot C)} = 0$



$R_1 - \frac{N_5 \cdot (N_1 \cdot N_4 + N_2 \cdot N_3)}{N_2 \cdot N_3} = 0.00000$

$R_1 - \frac{(A \cdot D + B \cdot C)}{(A \cdot D \cdot E)} = 0.00000$

$\frac{(A \cdot D + B \cdot C)}{(A \cdot D \cdot E)} - \frac{N_5 \cdot (N_1 \cdot N_4 + N_2 \cdot N_3)}{N_2 \cdot N_3} = 0.00000$

$A = 0.32779$   
 $B = 0.41651$   
 $C = 0.48303$   
 $D = 0.27063$   
 $E = 0.67613$

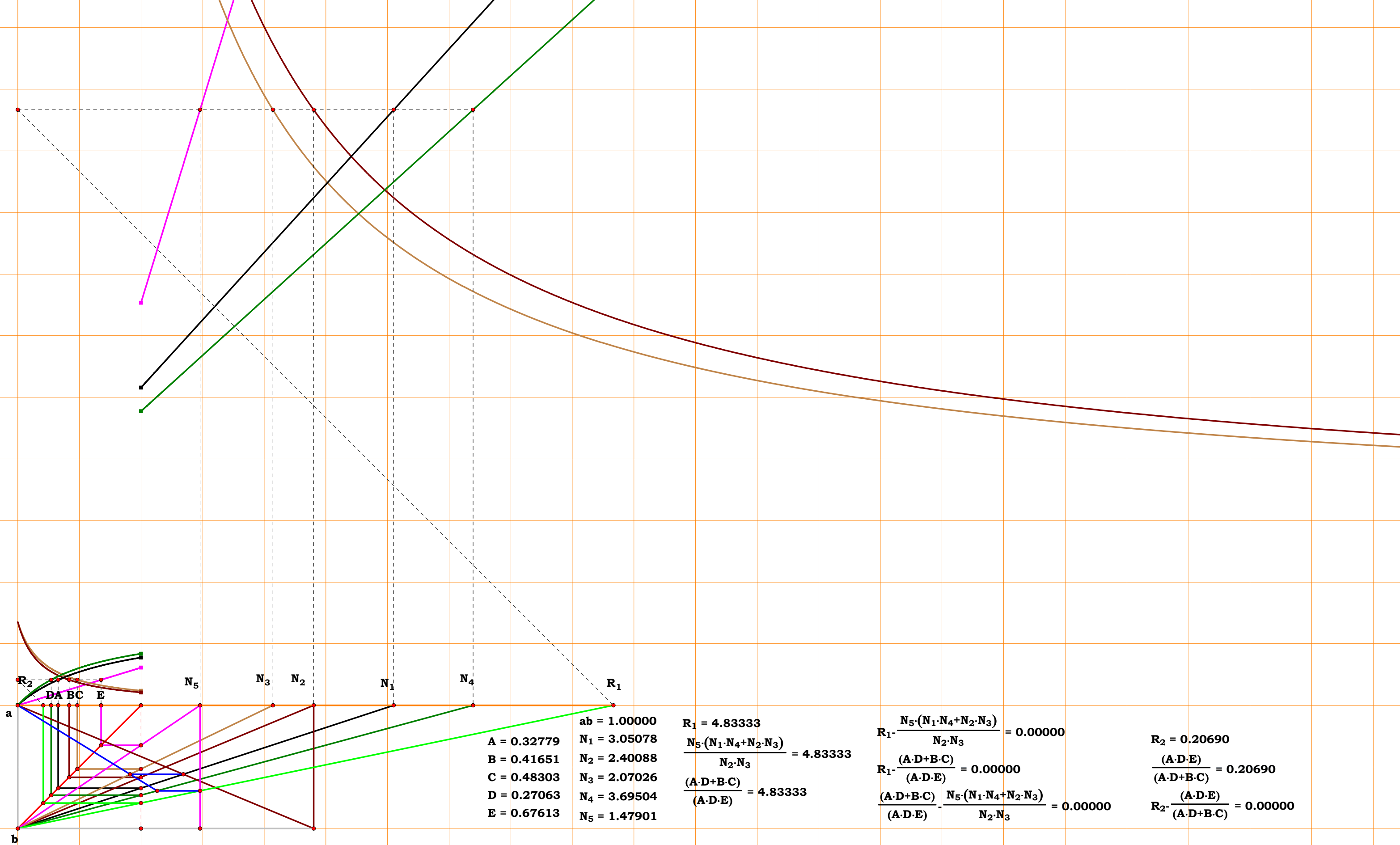
$ab = 1.00000$   
 $N_1 = 3.05078$   
 $N_2 = 2.40088$   
 $N_3 = 2.07026$   
 $N_4 = 3.69504$   
 $N_5 = 1.47901$

$R_2 = 0.20690$

$\frac{(A \cdot D \cdot E)}{(A \cdot D + B \cdot C)} = 0.20690$

$R_2 - \frac{(A \cdot D \cdot E)}{(A \cdot D + B \cdot C)} = 0.00000$

$R_1 = 4.83333$   
 $\frac{N_5 \cdot (N_1 \cdot N_4 + N_2 \cdot N_3)}{N_2 \cdot N_3} = 4.83333$   
 $\frac{(A \cdot D + B \cdot C)}{(A \cdot D \cdot E)} = 4.83333$





1CST6R6

Given.

Unit.  $ab := 1$      $N_1 := 2.66038$

$N_2 := 3.56774$      $N_3 := 1.50313$

$N_4 := 2.07979$      $N_5 := 1.82120$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$      $D := \frac{1}{N_4}$      $E := \frac{1}{N_5}$

Descriptions.

$fg := \frac{N_2}{N_1 + N_2}$      $be := N_3 \cdot fg$

$de := \frac{be}{N_4}$      $R_1 := \frac{N_5}{de}$

$R_1 = 4.398903$

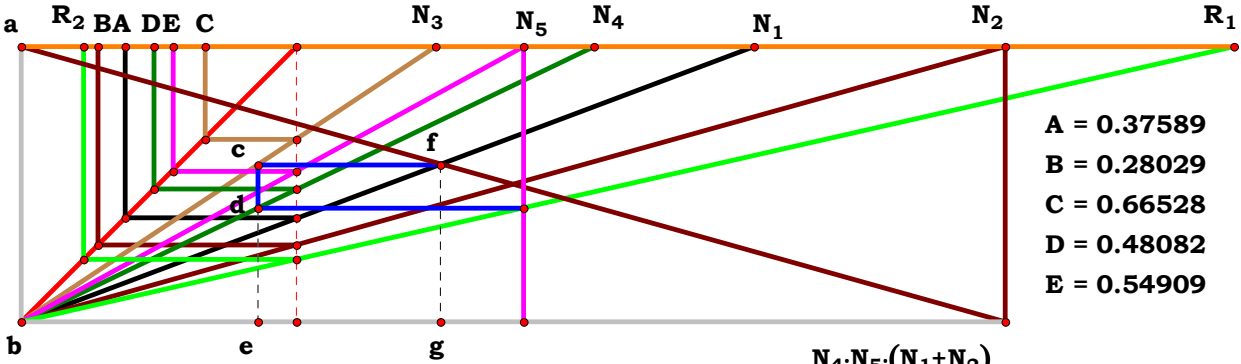
Definitions.

$R_1 - \frac{N_4 \cdot N_5 \cdot (N_1 + N_2)}{N_2 \cdot N_3} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$      $N_4 - \frac{1}{D} = 0$      $N_5 - \frac{1}{E} = 0$

$R_1 - \frac{C \cdot (A + B)}{A \cdot D \cdot E} = 0$



$A = 0.37589$   
 $B = 0.28029$   
 $C = 0.66528$   
 $D = 0.48082$   
 $E = 0.54909$

$R_1 - \frac{N_4 \cdot N_5 \cdot (N_1 + N_2)}{N_2 \cdot N_3} = 0.00000$

$R_1 - \frac{(C \cdot (A + B))}{(A \cdot D \cdot E)} = 0.00000$

$\frac{(C \cdot (A + B))}{(A \cdot D \cdot E)} - \frac{N_4 \cdot N_5 \cdot (N_1 + N_2)}{N_2 \cdot N_3} = 0.00000$

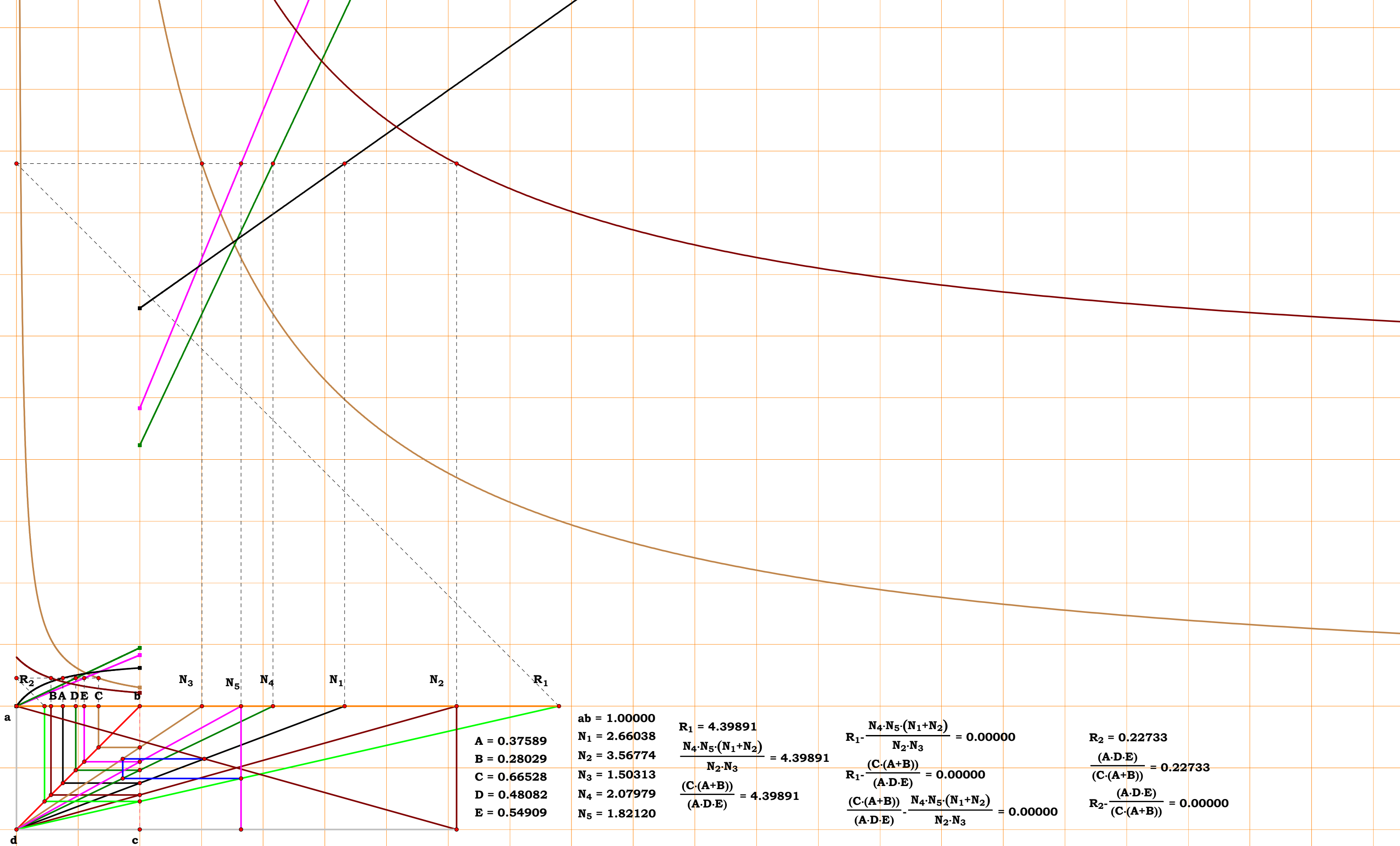
$ab = 1.00000$   
 $N_1 = 2.66038$   
 $N_2 = 3.56774$   
 $N_3 = 1.50313$   
 $N_4 = 2.07979$   
 $N_5 = 1.82120$

$R_1 = 4.39891$   
 $\frac{N_4 \cdot N_5 \cdot (N_1 + N_2)}{N_2 \cdot N_3} = 4.39891$   
 $\frac{(C \cdot (A + B))}{(A \cdot D \cdot E)} = 4.39891$

$R_2 = 0.22733$

$\frac{(A \cdot D \cdot E)}{(C \cdot (A + B))} = 0.22733$

$R_2 - \frac{(A \cdot D \cdot E)}{(C \cdot (A + B))} = 0.00000$





1CST6R7

Given.

Unit.  $ab := 1$      $N_1 := 3.29615$

$N_2 := 2.51211$      $N_3 := 1.93148$

$N_4 := 2.18330$      $N_5 := 1.59491$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$      $D := \frac{1}{N_4}$      $E := \frac{1}{N_5}$

Descriptions.

$ce := \frac{N_2}{N_1}$      $be := ce \cdot N_3$

$de := 1 - \frac{be}{N_4}$      $R_1 := \frac{N_5}{de}$

$R_1 = 4.895826$

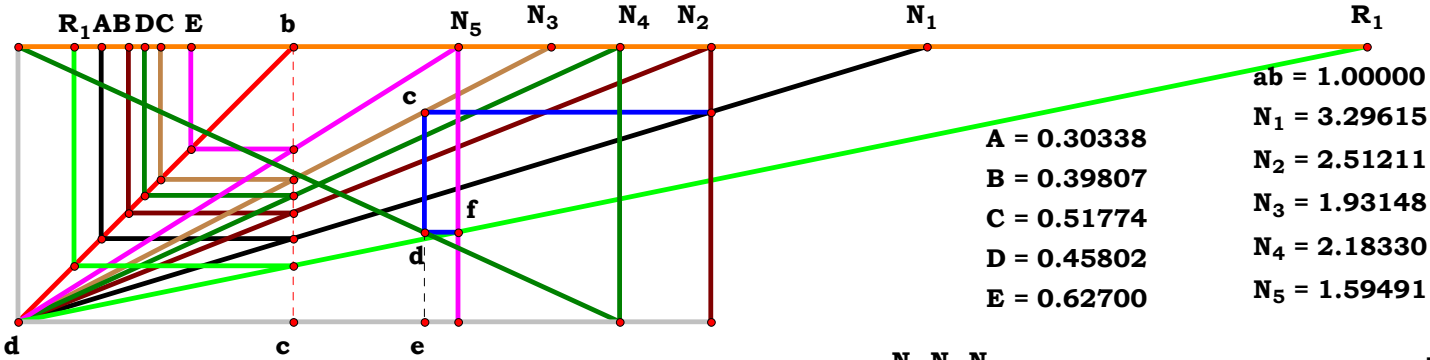
Definitions.

$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 - N_2 \cdot N_3} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$      $N_4 - \frac{1}{D} = 0$      $N_5 - \frac{1}{E} = 0$

$R_1 - \frac{B \cdot C}{E \cdot (B \cdot C - A \cdot D)} = 0$



$A = 0.30338$   
 $B = 0.39807$   
 $C = 0.51774$   
 $D = 0.45802$   
 $E = 0.62700$

$ab = 1.00000$   
 $N_1 = 3.29615$   
 $N_2 = 2.51211$   
 $N_3 = 1.93148$   
 $N_4 = 2.18330$   
 $N_5 = 1.59491$

$R_1 = 4.89578$

$\frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 - N_2 \cdot N_3} = 4.89578$

$\frac{(B \cdot C)}{(E \cdot (B \cdot C - A \cdot D))} = 4.89578$

$R_1 - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 - N_2 \cdot N_3} = 0.00000$

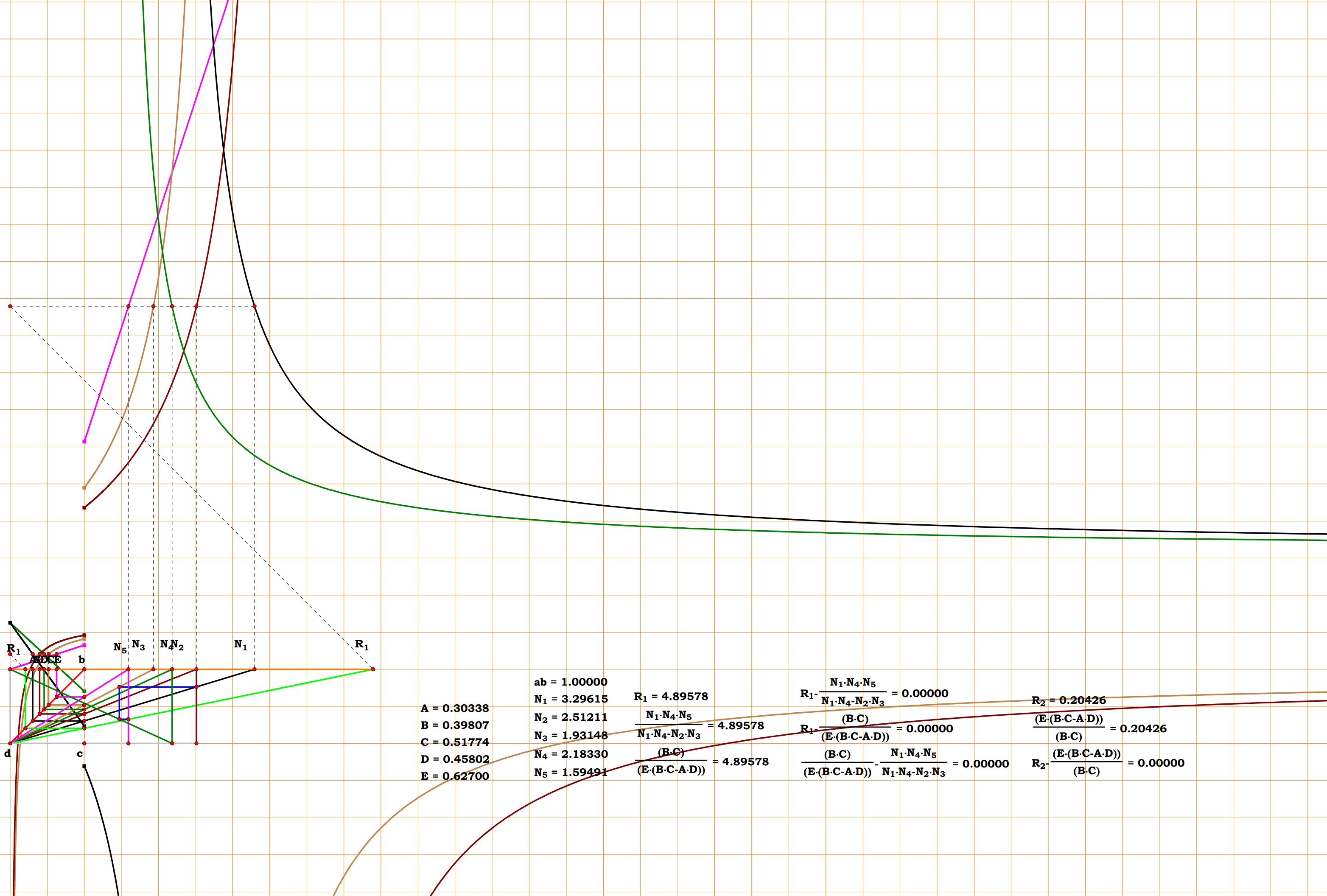
$R_1 - \frac{(B \cdot C)}{(E \cdot (B \cdot C - A \cdot D))} = 0.00000$

$\frac{(B \cdot C)}{(E \cdot (B \cdot C - A \cdot D))} - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 - N_2 \cdot N_3} = 0.00000$

$R_2 = 0.20426$

$\frac{(E \cdot (B \cdot C - A \cdot D))}{(B \cdot C)} = 0.20426$

$R_2 - \frac{(E \cdot (B \cdot C - A \cdot D))}{(B \cdot C)} = 0.00000$



A = 0.30338  
B = 0.39807  
C = 0.51774  
D = 0.45802  
E = 0.62700

ab = 1.00000  
N<sub>1</sub> = 3.29615  
N<sub>2</sub> = 2.51211  
N<sub>3</sub> = 1.93148  
N<sub>4</sub> = 2.18330  
N<sub>5</sub> = 1.59491

R<sub>1</sub> = 4.89578  
 $\frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 \cdot N_2 \cdot N_3} = 4.89578$   
 $\frac{(B \cdot C)}{(E \cdot (B \cdot C \cdot A \cdot D))} = 4.89578$

R<sub>1</sub> -  $\frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 \cdot N_2 \cdot N_3} = 0.00000$   
R<sub>1</sub> -  $\frac{(B \cdot C)}{(E \cdot (B \cdot C \cdot A \cdot D))} = 0.00000$   
 $\frac{(B \cdot C)}{(E \cdot (B \cdot C \cdot A \cdot D))} - \frac{N_1 \cdot N_4 \cdot N_5}{N_1 \cdot N_4 \cdot N_2 \cdot N_3} = 0.00000$

R<sub>2</sub> = 0.20426  
 $\frac{(E \cdot (B \cdot C \cdot A \cdot D))}{(B \cdot C)} = 0.20426$   
R<sub>2</sub> -  $\frac{(E \cdot (B \cdot C \cdot A \cdot D))}{(B \cdot C)} = 0.00000$



1CST7R0

Given.

Unit.  $ab := 1$      $N_1 := 2.18340$

$N_2 := 1.45145$      $N_3 := 2.37837$

$N_4 := 5.21277$      $N_5 := 3.03917$

$$A := \frac{1}{N_1} \quad B := \frac{1}{N_2} \quad C := \frac{1}{N_3} \quad D := \frac{1}{N_4} \quad E := \frac{1}{N_5}$$

Descriptions.

$$hj := \frac{N_3}{N_2 + N_3} \quad bj := \frac{N_2 \cdot N_3}{N_2 + N_3} \quad ac := \frac{(1 - hj) \cdot N_1}{N_1 - bj}$$

$$bg := N_4 \cdot (1 - ac) \quad bp := \frac{bg}{ac} \quad ko := \frac{bp}{bp + N_1}$$

$$be := N_5 \cdot ko \quad R_1 := \frac{be}{1 - ko} \quad R_1 = 3.985802$$

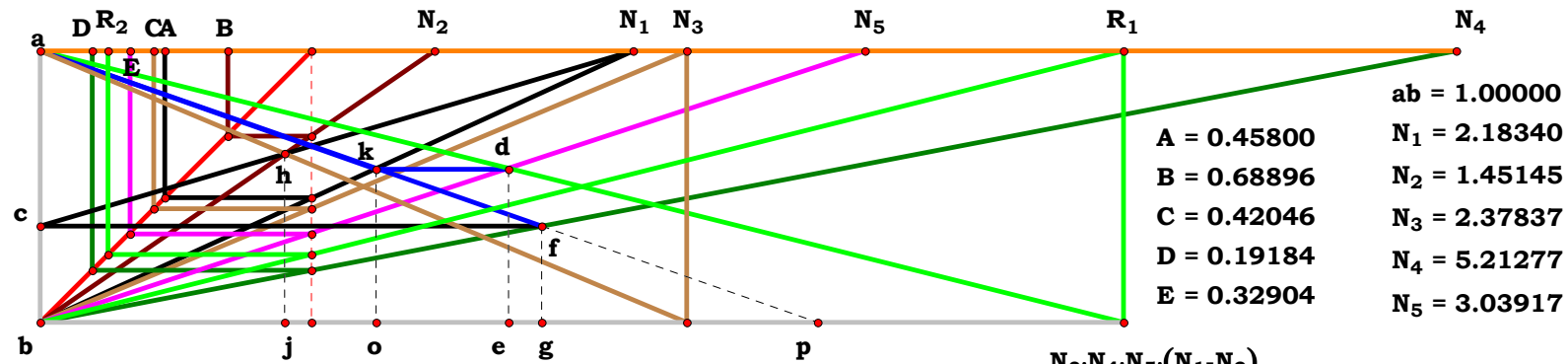
Definitions.

$$R_1 - \frac{N_3 \cdot N_4 \cdot N_5 \cdot (N_1 - N_2)}{N_1^2 \cdot N_2} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$N_4 - \frac{1}{D} = 0 \quad N_5 - \frac{1}{E} = 0$$

$$R_1 - \frac{A \cdot (B - A)}{C \cdot D \cdot E} = 0$$



$$R_1 - \frac{N_3 \cdot N_4 \cdot N_5 \cdot (N_1 - N_2)}{N_1^2 \cdot N_2} = 0.00000$$

$$R_1 - \frac{(A \cdot (B - A))}{(C \cdot D \cdot E)} = 0.00000$$

$$\frac{(A \cdot (B - A))}{(C \cdot D \cdot E)} - \frac{N_3 \cdot N_4 \cdot N_5 \cdot (N_1 - N_2)}{N_1^2 \cdot N_2} = 0.00000$$

$$R_1 = 3.98577$$

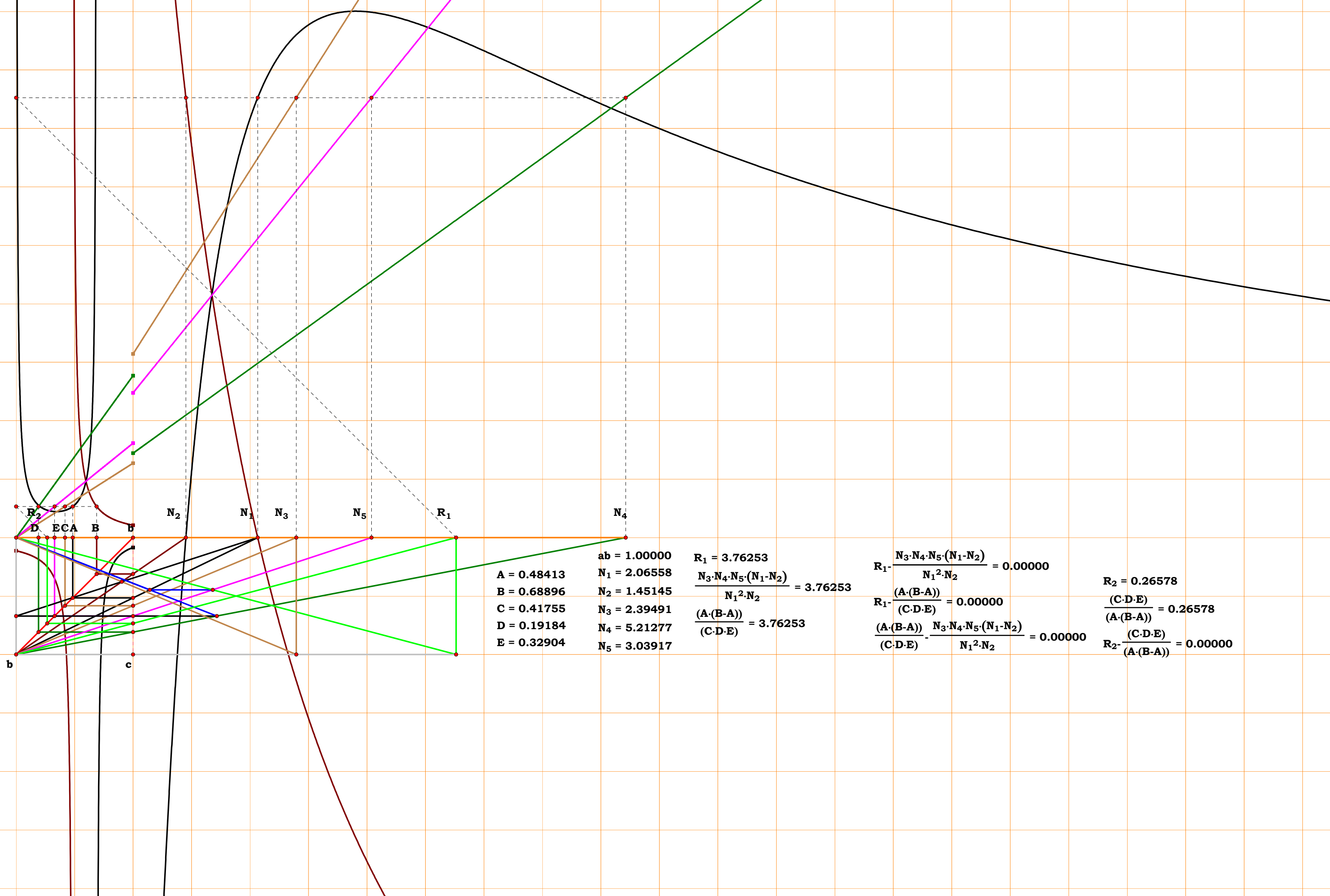
$$\frac{N_3 \cdot N_4 \cdot N_5 \cdot (N_1 - N_2)}{N_1^2 \cdot N_2} = 3.98577$$

$$\frac{(A \cdot (B - A))}{(C \cdot D \cdot E)} = 3.98577$$

$$R_2 = 0.25089$$

$$\frac{(C \cdot D \cdot E)}{(A \cdot (B - A))} = 0.25089$$

$$R_2 - \frac{(C \cdot D \cdot E)}{(A \cdot (B - A))} = 0.00000$$







1CST7R1

Given.

Unit.  $ab := 1$   $N_1 := 2.88899$

$N_2 := 1.98532$   $N_3 := 3.90241$   $N_4 := 2.31026$

$A := \frac{1}{N_1}$   $B := \frac{1}{N_2}$   $C := \frac{1}{N_3}$   $D := \frac{1}{N_4}$

Descriptions.

$fg := \frac{N_3}{N_2 + N_3}$   $bg := \frac{N_2 \cdot N_3}{N_2 + N_3}$

$ac := \frac{N_1 \cdot (1 - fg)}{N_1 - bg}$   $de := 1 - ac$

$be := N_4 \cdot de$   $R_1 := \frac{be}{ac}$

$R_1 = 1.420454$

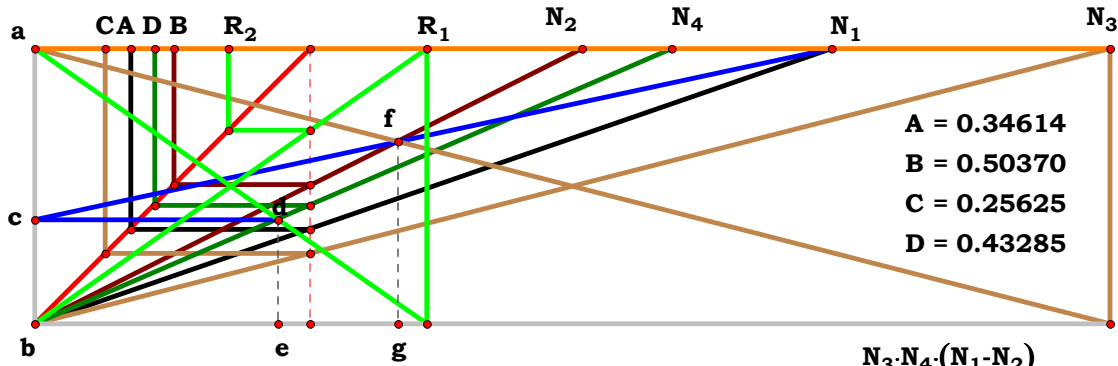
Definitions.

$R_1 - \frac{N_3 \cdot N_4 \cdot (N_1 - N_2)}{N_1 \cdot N_2} = 0$

$N_1 - \frac{1}{A} = 0$   $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$   $N_4 - \frac{1}{D} = 0$

$R_1 - \frac{(B - A)}{C \cdot D} = 0$



$A = 0.34614$   
 $B = 0.50370$   
 $C = 0.25625$   
 $D = 0.43285$

$ab = 1.00000$   
 $N_1 = 2.88899$   
 $N_2 = 1.98532$   
 $N_3 = 3.90241$   
 $N_4 = 2.31026$

$R_1 = 1.42047$   
 $\frac{N_3 \cdot N_4 \cdot (N_1 - N_2)}{N_1 \cdot N_2} = 1.42047$   
 $\frac{(B - A)}{(C \cdot D)} = 1.42047$

$R_1 - \frac{N_3 \cdot N_4 \cdot (N_1 - N_2)}{N_1 \cdot N_2} = 0.00000$

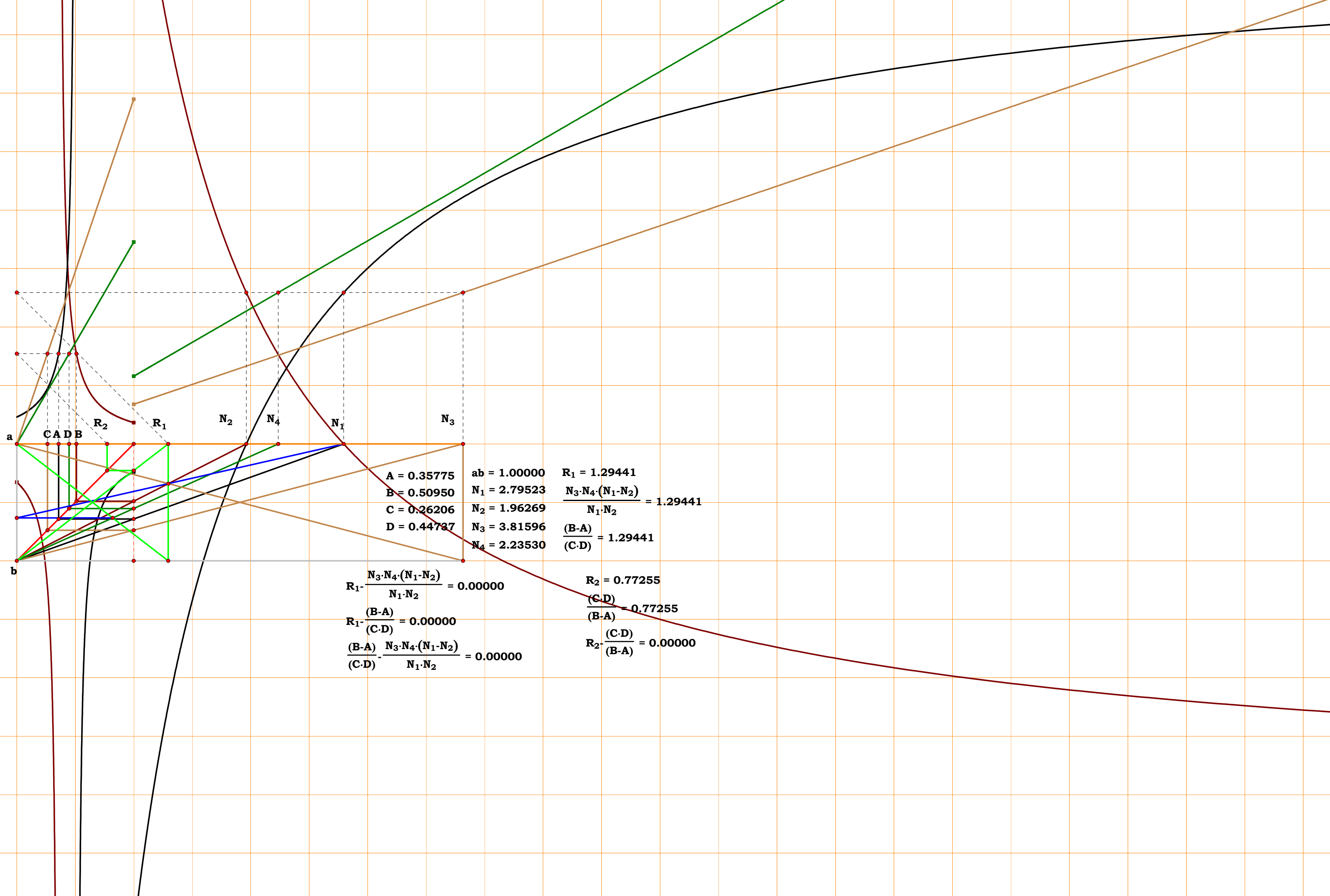
$R_1 - \frac{(B - A)}{(C \cdot D)} = 0.00000$

$\frac{(B - A)}{(C \cdot D)} - \frac{N_3 \cdot N_4 \cdot (N_1 - N_2)}{N_1 \cdot N_2} = 0.00000$

$R_2 = 0.70399$

$\frac{(C \cdot D)}{(B - A)} = 0.70399$

$R_2 - \frac{(C \cdot D)}{(B - A)} = 0.00000$





1CST7R2

Given.

Unit.  $ab := 1$     $N_1 := 2.18839$

$N_2 := 1.82738$     $N_3 := 2.55787$     $N_4 := 3.70379$

$A := \frac{1}{N_1}$     $B := \frac{1}{N_2}$     $C := \frac{1}{N_3}$     $D := \frac{1}{N_4}$

Descriptions.

$ef := \frac{N_3}{N_2 + N_3}$     $bf := N_2 \cdot ef$

$ac := \frac{N_1 \cdot (1 - ef)}{N_1 - bf}$     $R_1 := N_4 \cdot ac$

$R_1 = 3.008983$

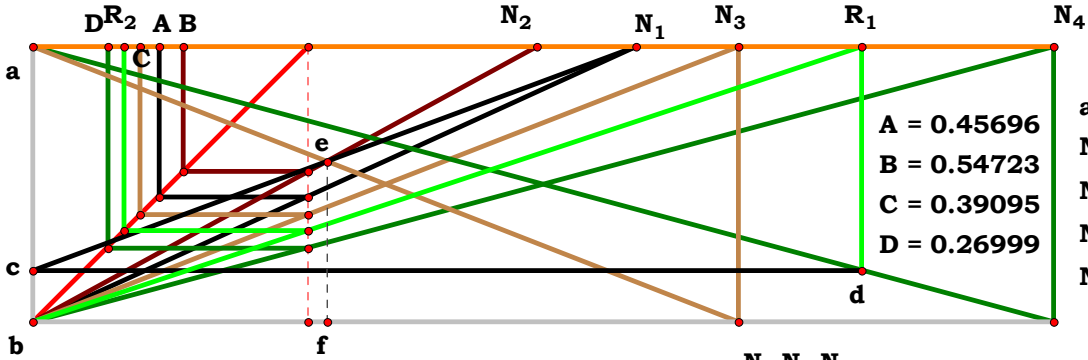
Definitions.

$R_1 - \frac{N_1 \cdot N_2 \cdot N_4}{N_1 \cdot N_2 + N_1 \cdot N_3 - N_2 \cdot N_3} = 0$

$N_1 - \frac{1}{A} = 0$     $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$     $N_4 - \frac{1}{D} = 0$

$R_1 - \frac{C}{D \cdot (B - A + C)} = 0$



$A = 0.45696$   
 $B = 0.54723$   
 $C = 0.39095$   
 $D = 0.26999$

$ab = 1.00000$   
 $N_1 = 2.18839$   
 $N_2 = 1.82738$   
 $N_3 = 2.55787$   
 $N_4 = 3.70379$

$R_1 - \frac{N_1 \cdot N_2 \cdot N_4}{(N_1 \cdot N_2 + N_1 \cdot N_3) - N_2 \cdot N_3} = 0.00000$

$R_1 - \frac{C}{(D \cdot ((B - A) + C))} = 0.00000$

$\frac{C}{(D \cdot ((B - A) + C))} - \frac{N_1 \cdot N_2 \cdot N_4}{(N_1 \cdot N_2 + N_1 \cdot N_3) - N_2 \cdot N_3} = 0.00000$

$R_1 = 3.00899$

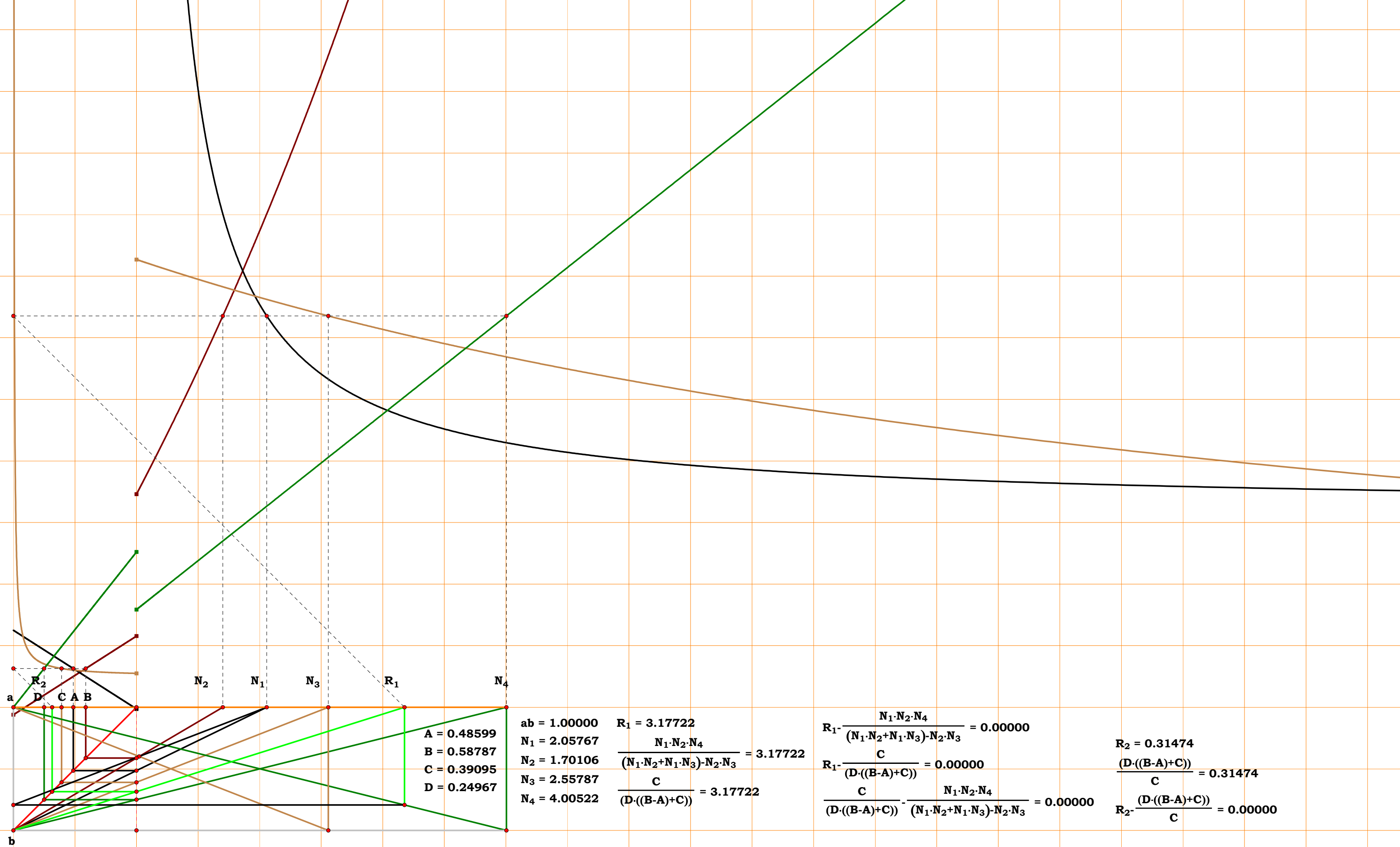
$\frac{N_1 \cdot N_2 \cdot N_4}{(N_1 \cdot N_2 + N_1 \cdot N_3) - N_2 \cdot N_3} = 3.00899$

$\frac{C}{(D \cdot ((B - A) + C))} = 3.00899$

$R_2 = 0.33234$

$\frac{(D \cdot ((B - A) + C))}{C} = 0.33234$

$R_2 - \frac{(D \cdot ((B - A) + C))}{C} = 0.00000$



$$R_1 = 3.17722$$

$$\frac{N_1 \cdot N_2 \cdot N_4}{(N_1 \cdot N_2 + N_1 \cdot N_3) - N_2 \cdot N_3} = 3.17722$$

$$\frac{C}{(D \cdot ((B-A) + C))} = 3.17722$$

$$R_1 - \frac{N_1 \cdot N_2 \cdot N_4}{(N_1 \cdot N_2 + N_1 \cdot N_3) - N_2 \cdot N_3} = 0.00000$$

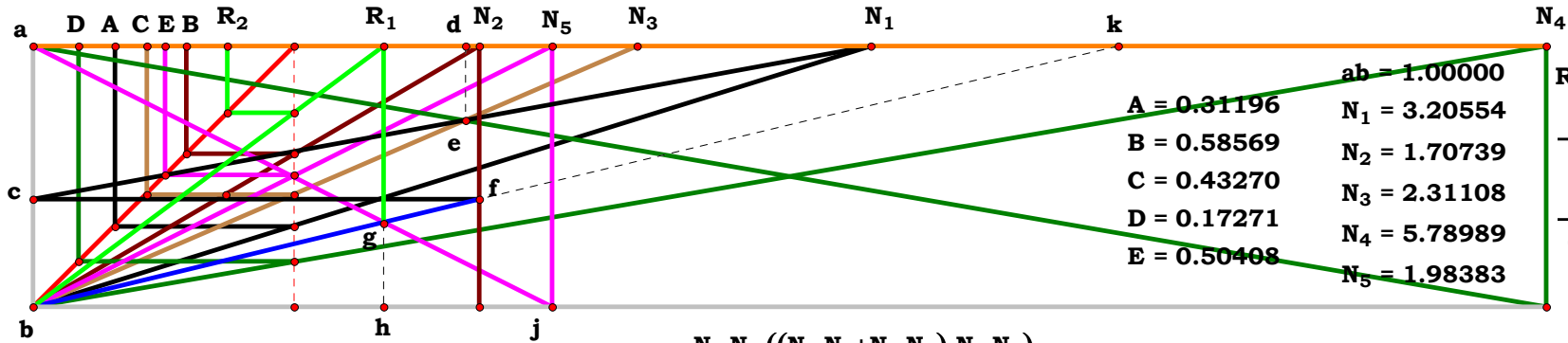
$$R_1 - \frac{C}{(D \cdot ((B-A) + C))} = 0.00000$$

$$\frac{C}{(D \cdot ((B-A) + C))} - \frac{N_1 \cdot N_2 \cdot N_4}{(N_1 \cdot N_2 + N_1 \cdot N_3) - N_2 \cdot N_3} = 0.00000$$

$$R_2 = 0.31474$$

$$\frac{(D \cdot ((B-A) + C))}{C} = 0.31474$$

$$R_2 - \frac{(D \cdot ((B-A) + C))}{C} = 0.00000$$



Given.

Unit.  $ab := 1$      $N_1 := 3.20554$

$N_2 := 1.70739$      $N_3 := 2.31108$

$N_4 := 5.78989$      $N_5 := 1.98383$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$      $D := \frac{1}{N_4}$      $E := \frac{1}{N_5}$

Descriptions.

$ad := \frac{N_3 \cdot N_4}{N_3 + N_4}$      $de := \frac{ad}{N_4}$

$ac := \frac{de \cdot N_1}{N_1 - ad}$      $ak := \frac{N_2}{1 - ac}$

$R_1 := \frac{ak \cdot N_5}{ak + N_5}$      $R_1 = 1.34219$

Definitions.

$R_1 - \frac{N_2 \cdot N_5 \cdot (N_1 \cdot N_3 + N_1 \cdot N_4 - N_3 \cdot N_4)}{N_1 \cdot N_2 \cdot (N_3 + N_4) - N_2 \cdot N_3 \cdot N_4 + N_4 \cdot N_5 \cdot (N_1 - N_3)} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$      $N_3 - \frac{1}{C} = 0$

$N_4 - \frac{1}{D} = 0$      $N_5 - \frac{1}{E} = 0$

$R_1 - \frac{(C - A + D)}{B \cdot C - A \cdot B - A \cdot E + C \cdot E + D \cdot E} = 0$

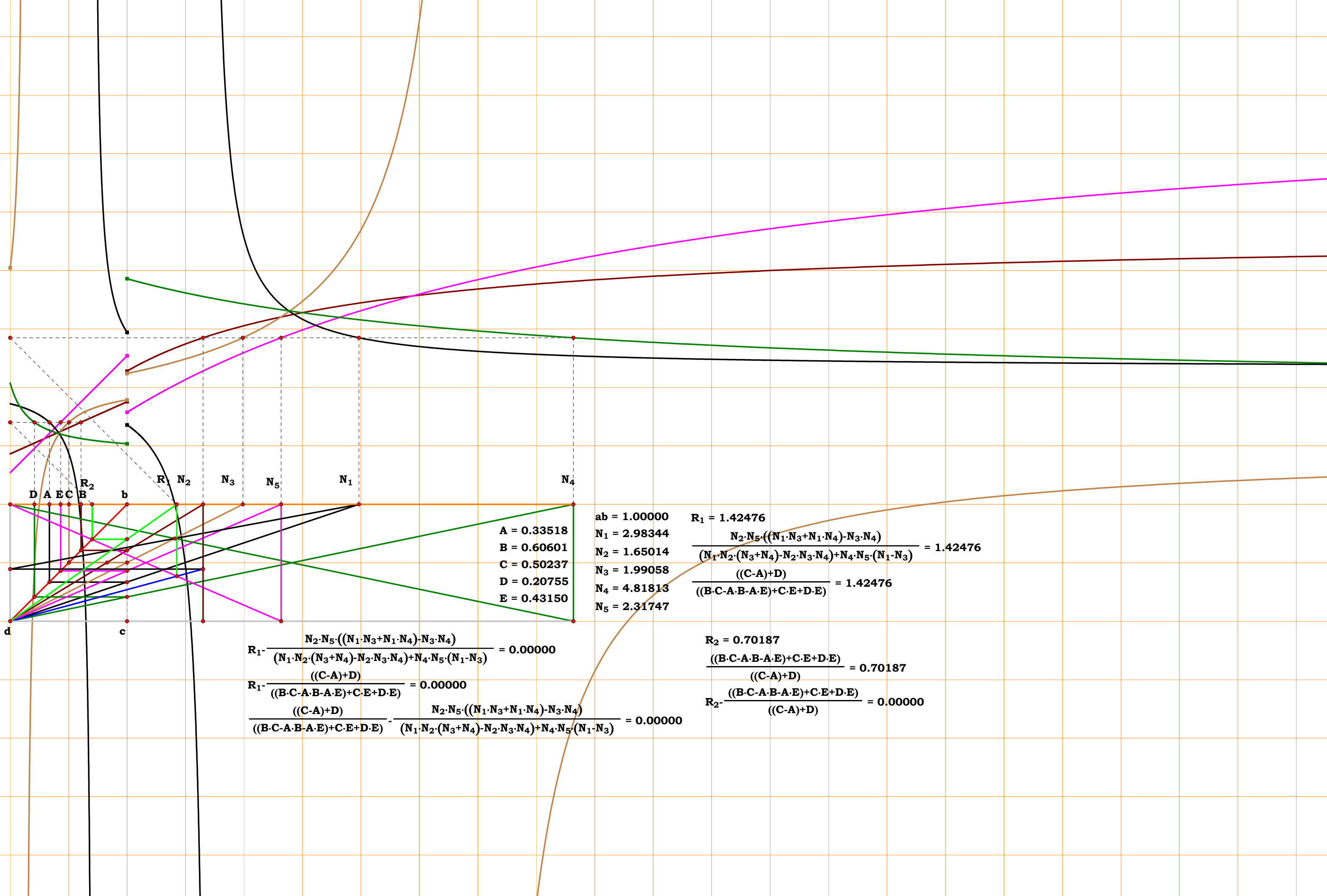
$ab = 1.00000$   
 $A = 0.31196$   
 $B = 0.58569$   
 $C = 0.43270$   
 $D = 0.17271$   
 $E = 0.50408$

$N_1 = 3.20554$   
 $N_2 = 1.70739$   
 $N_3 = 2.31108$   
 $N_4 = 5.78989$   
 $N_5 = 1.98383$

$R_1 = 1.34219$   
 $\frac{N_2 \cdot N_5 \cdot ((N_1 \cdot N_3 + N_1 \cdot N_4) - N_3 \cdot N_4)}{(N_1 \cdot N_2 \cdot (N_3 + N_4) - N_2 \cdot N_3 \cdot N_4) + N_4 \cdot N_5 \cdot (N_1 - N_3)} = 1.34219$   
 $\frac{((C - A) + D)}{((B \cdot C - A \cdot B - A \cdot E) + C \cdot E + D \cdot E)} = 1.34219$

$R_2 = 0.74505$   
 $\frac{((B \cdot C - A \cdot B - A \cdot E) + C \cdot E + D \cdot E)}{((C - A) + D)} = 0.74505$   
 $R_2 - \frac{((B \cdot C - A \cdot B - A \cdot E) + C \cdot E + D \cdot E)}{((C - A) + D)} = 0.00000$

$R_1 - \frac{N_2 \cdot N_5 \cdot ((N_1 \cdot N_3 + N_1 \cdot N_4) - N_3 \cdot N_4)}{(N_1 \cdot N_2 \cdot (N_3 + N_4) - N_2 \cdot N_3 \cdot N_4) + N_4 \cdot N_5 \cdot (N_1 - N_3)} = 0.00000$   
 $R_1 - \frac{((C - A) + D)}{((B \cdot C - A \cdot B - A \cdot E) + C \cdot E + D \cdot E)} = 0.00000$   
 $\frac{((C - A) + D)}{((B \cdot C - A \cdot B - A \cdot E) + C \cdot E + D \cdot E)} - \frac{N_2 \cdot N_5 \cdot ((N_1 \cdot N_3 + N_1 \cdot N_4) - N_3 \cdot N_4)}{(N_1 \cdot N_2 \cdot (N_3 + N_4) - N_2 \cdot N_3 \cdot N_4) + N_4 \cdot N_5 \cdot (N_1 - N_3)} = 0.00000$



**A = 0.33518**  
**B = 0.60601**  
**C = 0.50237**  
**D = 0.20755**  
**E = 0.43150**

**ab = 1.00000**  
**N<sub>1</sub> = 2.98344**  
**N<sub>2</sub> = 1.65014**  
**N<sub>3</sub> = 1.99058**  
**N<sub>4</sub> = 4.81813**  
**N<sub>5</sub> = 2.31747**

$$R_1 - \frac{N_2 \cdot N_5 \cdot ((N_1 \cdot N_3 + N_1 \cdot N_4) - N_3 \cdot N_4)}{(N_1 \cdot N_2 \cdot (N_3 + N_4) - N_2 \cdot N_3 \cdot N_4) + N_4 \cdot N_5 \cdot (N_1 - N_3)} = 0.00000$$

$$R_1 - \frac{((C - A) + D)}{((B \cdot C - A \cdot B - A \cdot E) + C \cdot E + D \cdot E)} = 0.00000$$

$$\frac{((C - A) + D)}{((B \cdot C - A \cdot B - A \cdot E) + C \cdot E + D \cdot E)} - \frac{N_2 \cdot N_5 \cdot ((N_1 \cdot N_3 + N_1 \cdot N_4) - N_3 \cdot N_4)}{(N_1 \cdot N_2 \cdot (N_3 + N_4) - N_2 \cdot N_3 \cdot N_4) + N_4 \cdot N_5 \cdot (N_1 - N_3)} = 0.00000$$

**R<sub>1</sub> = 1.42476**

$$\frac{N_2 \cdot N_5 \cdot ((N_1 \cdot N_3 + N_1 \cdot N_4) - N_3 \cdot N_4)}{(N_1 \cdot N_2 \cdot (N_3 + N_4) - N_2 \cdot N_3 \cdot N_4) + N_4 \cdot N_5 \cdot (N_1 - N_3)} = 1.42476$$

$$\frac{((C - A) + D)}{((B \cdot C - A \cdot B - A \cdot E) + C \cdot E + D \cdot E)} = 1.42476$$

**R<sub>2</sub> = 0.70187**

$$\frac{((B \cdot C - A \cdot B - A \cdot E) + C \cdot E + D \cdot E)}{((C - A) + D)} = 0.70187$$

$$R_2 - \frac{((B \cdot C - A \cdot B - A \cdot E) + C \cdot E + D \cdot E)}{((C - A) + D)} = 0.00000$$



1CST7R4

Given.

Unit.  $ab := 1$       $N_1 := 4.12280$

$N_2 := 2.30749$       $N_3 := 3.11345$

$N_4 := 1.87019$       $N_5 := 1.51616$

$A := \frac{1}{N_1}$     $B := \frac{1}{N_2}$     $C := \frac{1}{N_3}$     $D := \frac{1}{N_4}$     $E := \frac{1}{N_5}$

Descriptions.

$hj := \frac{N_3}{N_2 + N_3}$       $bj := \frac{N_2 \cdot N_3}{N_2 + N_3}$

$ac := \frac{N_1 \cdot (1 - hj)}{N_1 - bj}$       $be := N_4 \cdot (1 - ac)$

$bk := \frac{be}{ac}$       $FG := \frac{bk}{bk + N_1}$

$R_1 := N_5 \cdot (1 - FG)$       $R_1 = 1.1943$

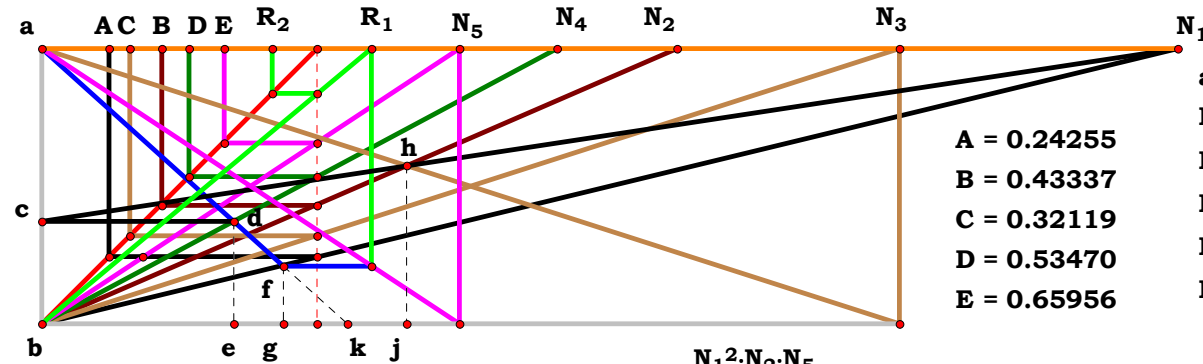
Definitions.

$$R_1 - \frac{N_1^2 \cdot N_2 \cdot N_5}{N_1^2 \cdot N_2 + N_1 \cdot N_3 \cdot N_4 - N_2 \cdot N_3 \cdot N_4} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$N_4 - \frac{1}{D} = 0 \quad N_5 - \frac{1}{E} = 0$$

$$R_1 - \frac{C \cdot D}{E \cdot (B \cdot A - A^2 + C \cdot D)} = 0$$



$A = 0.24255$   
 $B = 0.43337$   
 $C = 0.32119$   
 $D = 0.53470$   
 $E = 0.65956$

$ab = 1.00000$   
 $N_1 = 4.12280$   
 $N_2 = 2.30749$   
 $N_3 = 3.11345$   
 $N_4 = 1.87019$   
 $N_5 = 1.51616$

$R_1 = 1.19429$   
 $\frac{N_1^2 \cdot N_2 \cdot N_5}{(N_1^2 \cdot N_2 + N_1 \cdot N_3 \cdot N_4) - N_2 \cdot N_3 \cdot N_4} = 1.19429$   
 $\frac{(C \cdot D)}{(E \cdot ((B \cdot A - A^2) + C \cdot D))} = 1.19429$

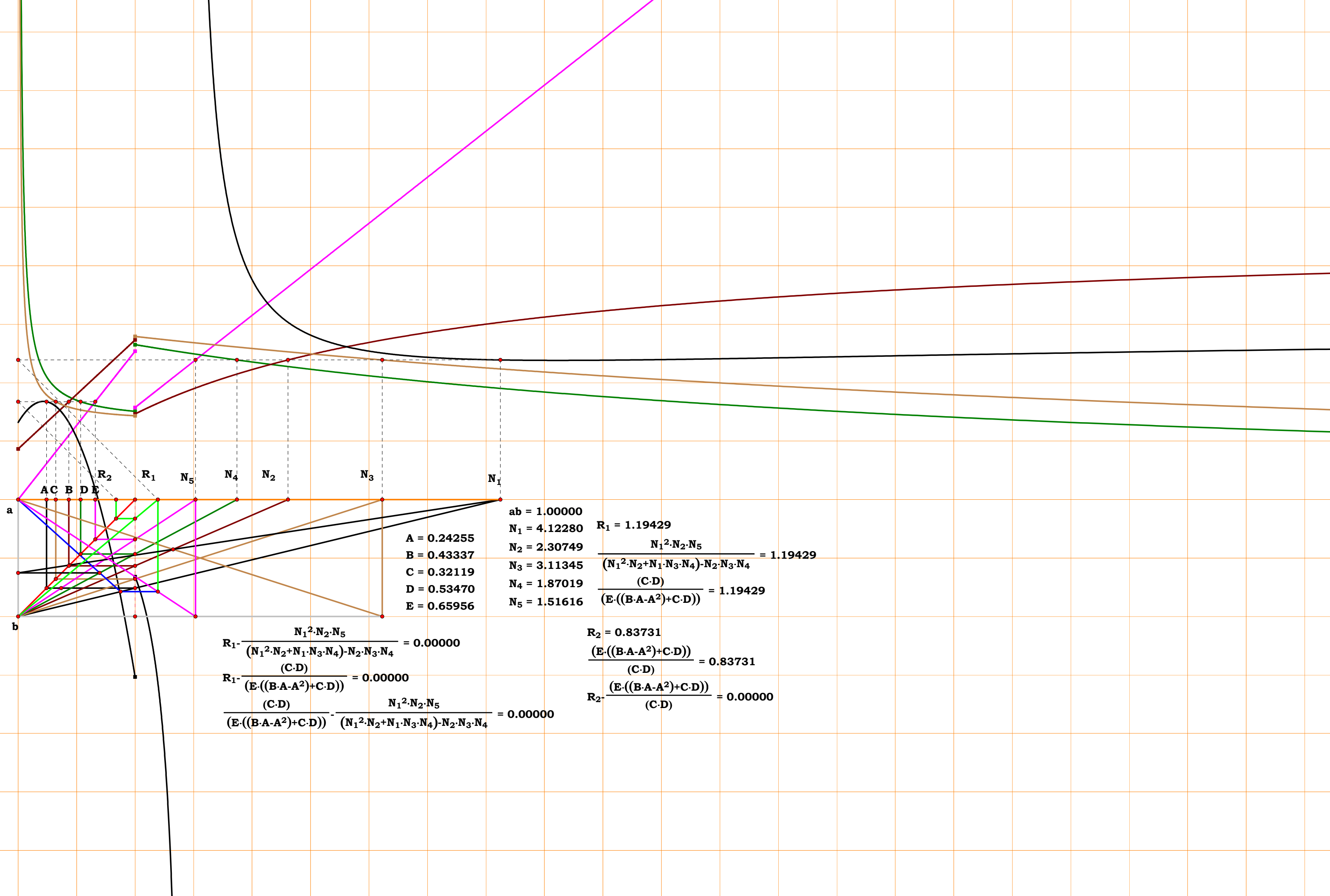
$$R_1 - \frac{N_1^2 \cdot N_2 \cdot N_5}{(N_1^2 \cdot N_2 + N_1 \cdot N_3 \cdot N_4) - N_2 \cdot N_3 \cdot N_4} = 0.00000$$

$$R_1 - \frac{(C \cdot D)}{(E \cdot ((B \cdot A - A^2) + C \cdot D))} = 0.00000$$

$$\frac{(C \cdot D)}{(E \cdot ((B \cdot A - A^2) + C \cdot D))} - \frac{N_1^2 \cdot N_2 \cdot N_5}{(N_1^2 \cdot N_2 + N_1 \cdot N_3 \cdot N_4) - N_2 \cdot N_3 \cdot N_4} = 0.00000$$

$R_2 = 0.83731$   
 $\frac{(E \cdot ((B \cdot A - A^2) + C \cdot D))}{(C \cdot D)} = 0.83731$

$$R_2 - \frac{(E \cdot ((B \cdot A - A^2) + C \cdot D))}{(C \cdot D)} = 0.00000$$



a

b

A C B D E

R<sub>2</sub>

R<sub>1</sub>

N<sub>5</sub>

N<sub>4</sub>

N<sub>2</sub>

N<sub>3</sub>

N<sub>1</sub>

A = 0.24255  
B = 0.43337  
C = 0.32119  
D = 0.53470  
E = 0.65956

ab = 1.00000  
N<sub>1</sub> = 4.12280  
N<sub>2</sub> = 2.30749  
N<sub>3</sub> = 3.11345  
N<sub>4</sub> = 1.87019  
N<sub>5</sub> = 1.51616

R<sub>1</sub> = 1.19429

$$\frac{N_1^2 \cdot N_2 \cdot N_5}{(N_1^2 \cdot N_2 + N_1 \cdot N_3 \cdot N_4) - N_2 \cdot N_3 \cdot N_4} = 1.19429$$
$$\frac{(C \cdot D)}{(E \cdot ((B \cdot A - A^2) + C \cdot D))} = 1.19429$$

$$R_1 - \frac{N_1^2 \cdot N_2 \cdot N_5}{(N_1^2 \cdot N_2 + N_1 \cdot N_3 \cdot N_4) - N_2 \cdot N_3 \cdot N_4} = 0.00000$$
$$R_1 - \frac{(C \cdot D)}{(E \cdot ((B \cdot A - A^2) + C \cdot D))} = 0.00000$$
$$\frac{(C \cdot D)}{(E \cdot ((B \cdot A - A^2) + C \cdot D))} - \frac{N_1^2 \cdot N_2 \cdot N_5}{(N_1^2 \cdot N_2 + N_1 \cdot N_3 \cdot N_4) - N_2 \cdot N_3 \cdot N_4} = 0.00000$$

R<sub>2</sub> = 0.83731

$$\frac{(E \cdot ((B \cdot A - A^2) + C \cdot D))}{(C \cdot D)} = 0.83731$$
$$R_2 - \frac{(E \cdot ((B \cdot A - A^2) + C \cdot D))}{(C \cdot D)} = 0.00000$$





1CST7R5

Given.

$$\text{Unit. } ab := 1 \quad N_1 := 3.14079$$

$$N_2 := 3.73524$$

$$N_3 := 1.45348 \quad N_4 := 1.91129$$

$$N_5 := 2.24401 \quad N_6 := 1.66218$$

$$A := \frac{1}{N_1} \quad B := \frac{1}{N_2} \quad C := \frac{1}{N_3} \quad D := \frac{1}{N_4} \quad E := \frac{1}{N_5} \quad F := \frac{1}{N_6}$$

Descriptions.

$$fg := \frac{N_2}{N_2 + N_3} \quad bg := \frac{N_2 \cdot N_3}{N_2 + N_3} \quad ac := \frac{N_1 \cdot (1 - fg)}{N_1 - bg}$$

$$be := N_4 \cdot (1 - ac) \quad bk := \frac{be}{ac} \quad hj := \frac{bk}{bk + N_1}$$

$$ao := \frac{N_5}{hj} \quad R_1 := \frac{N_6 \cdot ao}{N_6 + ao} \quad R_1 = 1.242115$$

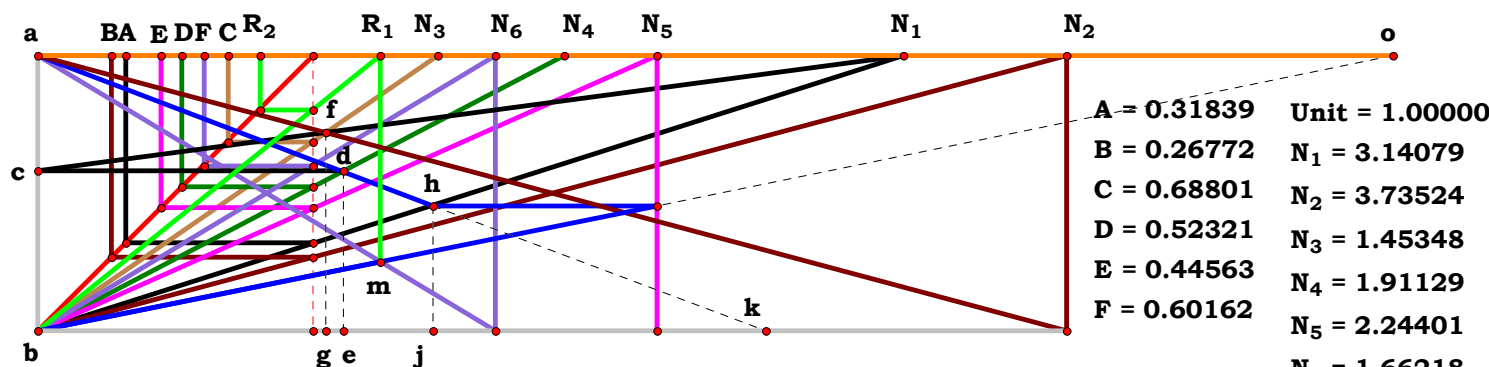
Definitions.

$$R_1 - \frac{N_5 \cdot N_6 \cdot [N_1^2 \cdot N_3 + N_2 \cdot N_4 \cdot (N_1 - N_3)]}{N_1 \cdot N_5 \cdot (N_1 \cdot N_3 + N_2 \cdot N_4) + N_2 \cdot N_4 \cdot (N_1 \cdot N_6 - N_3 \cdot N_5 - N_3 \cdot N_6)} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0$$

$$N_4 - \frac{1}{D} = 0 \quad N_5 - \frac{1}{E} = 0 \quad N_6 - \frac{1}{F} = 0$$

$$R_1 - \frac{(C \cdot A - A^2 + B \cdot D)}{A \cdot C \cdot E - A^2 \cdot F - A^2 \cdot E + A \cdot C \cdot F + B \cdot D \cdot F} = 0$$



$$\begin{aligned} A &= 0.31839 & \text{Unit} &= 1.00000 \\ B &= 0.26772 & N_1 &= 3.14079 \\ C &= 0.68801 & N_2 &= 3.73524 \\ D &= 0.52321 & N_3 &= 1.45348 \\ E &= 0.44563 & N_4 &= 1.91129 \\ F &= 0.60162 & N_5 &= 2.24401 \\ & & N_6 &= 1.66218 \end{aligned}$$

$$R_1 - \frac{N_5 \cdot N_6 \cdot (N_1^2 \cdot N_3 + N_2 \cdot N_4 \cdot (N_1 - N_3))}{N_1 \cdot N_5 \cdot (N_1 \cdot N_3 + N_2 \cdot N_4) + N_2 \cdot N_4 \cdot (N_1 \cdot N_6 - N_3 \cdot N_5 - N_3 \cdot N_6)} = 0.00000$$

$$R_1 - \frac{((A \cdot C - A^2) + B \cdot D)}{((A \cdot C \cdot E - A^2 \cdot F - A^2 \cdot E) + A \cdot C \cdot F + B \cdot D \cdot F)} = 0.00000$$

$$\frac{((A \cdot C - A^2) + B \cdot D)}{((A \cdot C \cdot E - A^2 \cdot F - A^2 \cdot E) + A \cdot C \cdot F + B \cdot D \cdot F)} - \frac{N_5 \cdot N_6 \cdot (N_1^2 \cdot N_3 + N_2 \cdot N_4 \cdot (N_1 - N_3))}{N_1 \cdot N_5 \cdot (N_1 \cdot N_3 + N_2 \cdot N_4) + N_2 \cdot N_4 \cdot (N_1 \cdot N_6 - N_3 \cdot N_5 - N_3 \cdot N_6)} = 0.00000$$

$$R_1 = 1.24211$$

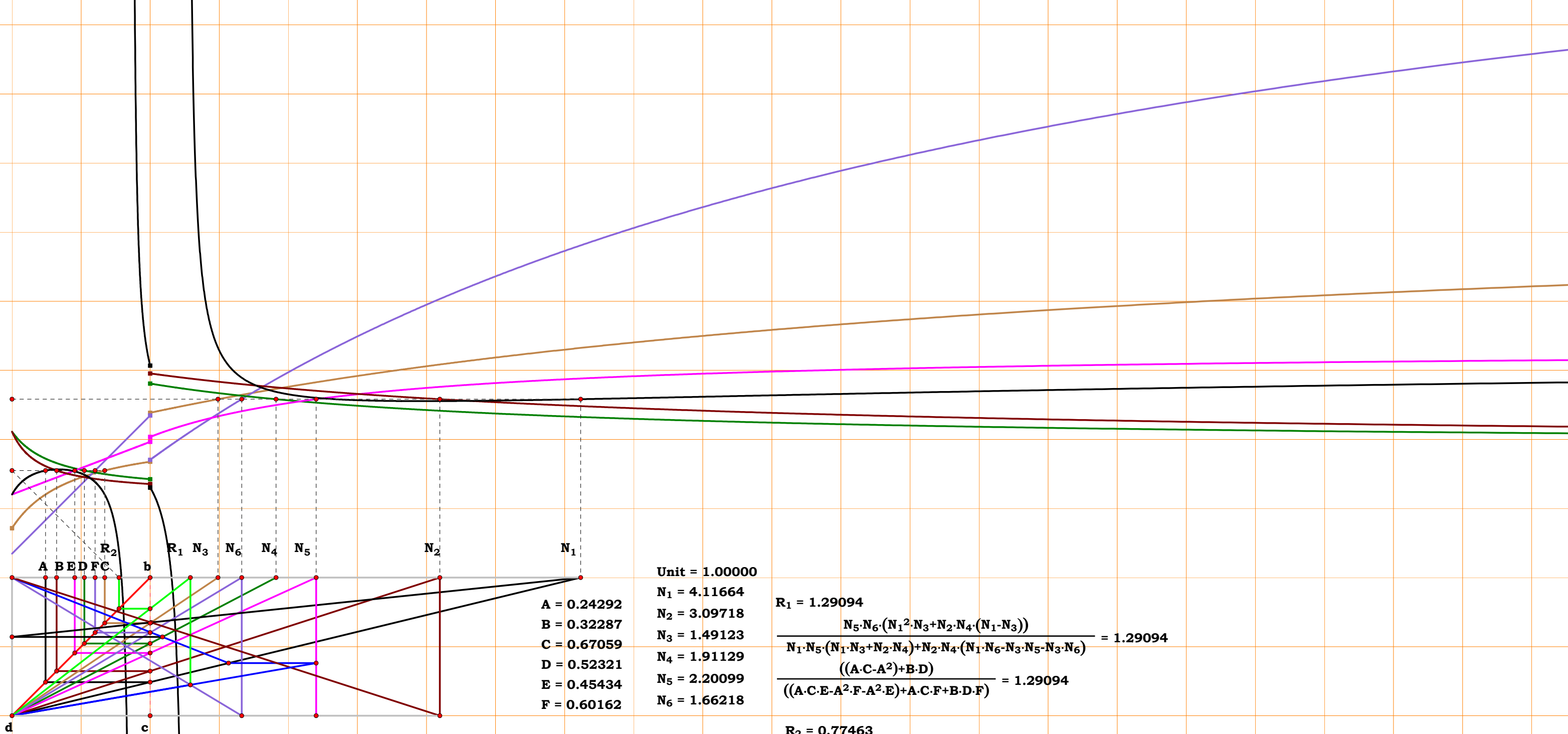
$$\frac{N_5 \cdot N_6 \cdot (N_1^2 \cdot N_3 + N_2 \cdot N_4 \cdot (N_1 - N_3))}{N_1 \cdot N_5 \cdot (N_1 \cdot N_3 + N_2 \cdot N_4) + N_2 \cdot N_4 \cdot (N_1 \cdot N_6 - N_3 \cdot N_5 - N_3 \cdot N_6)} = 1.24211$$

$$\frac{((A \cdot C - A^2) + B \cdot D)}{((A \cdot C \cdot E - A^2 \cdot F - A^2 \cdot E) + A \cdot C \cdot F + B \cdot D \cdot F)} = 1.24211$$

$$R_2 = 0.80508$$

$$\frac{((A \cdot C \cdot E - A^2 \cdot F - A^2 \cdot E) + A \cdot C \cdot F + B \cdot D \cdot F)}{((A \cdot C - A^2) + B \cdot D)} = 0.80508$$

$$R_2 - \frac{((A \cdot C \cdot E - A^2 \cdot F - A^2 \cdot E) + A \cdot C \cdot F + B \cdot D \cdot F)}{((A \cdot C - A^2) + B \cdot D)} = 0.00000$$



Unit = 1.00000

A = 0.24292  
 B = 0.32287  
 C = 0.67059  
 D = 0.52321  
 E = 0.45434  
 F = 0.60162

N<sub>1</sub> = 4.11664  
 N<sub>2</sub> = 3.09718  
 N<sub>3</sub> = 1.49123  
 N<sub>4</sub> = 1.91129  
 N<sub>5</sub> = 2.20099  
 N<sub>6</sub> = 1.66218

R<sub>1</sub> = 1.29094

$$\frac{N_5 \cdot N_6 \cdot (N_1^2 \cdot N_3 + N_2 \cdot N_4 \cdot (N_1 - N_3))}{N_1 \cdot N_5 \cdot (N_1 \cdot N_3 + N_2 \cdot N_4) + N_2 \cdot N_4 \cdot (N_1 \cdot N_6 - N_3 \cdot N_5 - N_3 \cdot N_6)} = 1.29094$$

$$\frac{((A \cdot C - A^2) + B \cdot D)}{((A \cdot C \cdot E - A^2 \cdot F - A^2 \cdot E) + A \cdot C \cdot F + B \cdot D \cdot F)} = 1.29094$$

R<sub>2</sub> = 0.77463

$$\frac{((A \cdot C \cdot E - A^2 \cdot F - A^2 \cdot E) + A \cdot C \cdot F + B \cdot D \cdot F)}{((A \cdot C - A^2) + B \cdot D)} = 0.77463$$

$$R_2 - \frac{((A \cdot C \cdot E - A^2 \cdot F - A^2 \cdot E) + A \cdot C \cdot F + B \cdot D \cdot F)}{((A \cdot C - A^2) + B \cdot D)} = 0.00000$$

$$R_1 - \frac{N_5 \cdot N_6 \cdot (N_1^2 \cdot N_3 + N_2 \cdot N_4 \cdot (N_1 - N_3))}{N_1 \cdot N_5 \cdot (N_1 \cdot N_3 + N_2 \cdot N_4) + N_2 \cdot N_4 \cdot (N_1 \cdot N_6 - N_3 \cdot N_5 - N_3 \cdot N_6)} = 0.00000$$

$$R_1 - \frac{((A \cdot C - A^2) + B \cdot D)}{((A \cdot C \cdot E - A^2 \cdot F - A^2 \cdot E) + A \cdot C \cdot F + B \cdot D \cdot F)} = 0.00000$$

$$\frac{((A \cdot C - A^2) + B \cdot D)}{((A \cdot C \cdot E - A^2 \cdot F - A^2 \cdot E) + A \cdot C \cdot F + B \cdot D \cdot F)} - \frac{N_5 \cdot N_6 \cdot (N_1^2 \cdot N_3 + N_2 \cdot N_4 \cdot (N_1 - N_3))}{N_1 \cdot N_5 \cdot (N_1 \cdot N_3 + N_2 \cdot N_4) + N_2 \cdot N_4 \cdot (N_1 \cdot N_6 - N_3 \cdot N_5 - N_3 \cdot N_6)} = 0.00000$$



**Unit.**  $\mathbf{ab} := 1$      $\mathbf{N}_1 := 3.11808$

$$\mathbf{N}_2 := 3.69662 \quad \mathbf{N}_3 := 1.49072$$

$$N_4 := 2.19943 \quad N_5 := 2.66738$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3} \quad \mathbf{D} := \frac{1}{N_4} \quad \mathbf{E} := \frac{1}{N_5}$$

$$\mathbf{hj} := \frac{\mathbf{N}_2}{\mathbf{N}_2 + \mathbf{N}_3} \quad \mathbf{bj} := \mathbf{hj} \cdot \mathbf{N}_3$$

$$\mathbf{ac} := \frac{\mathbf{N_1} \cdot (1 - \mathbf{hj})}{\mathbf{N_1} - \mathbf{bj}} \quad \mathbf{be} := \mathbf{N_4} \cdot (1 - \mathbf{ac})$$

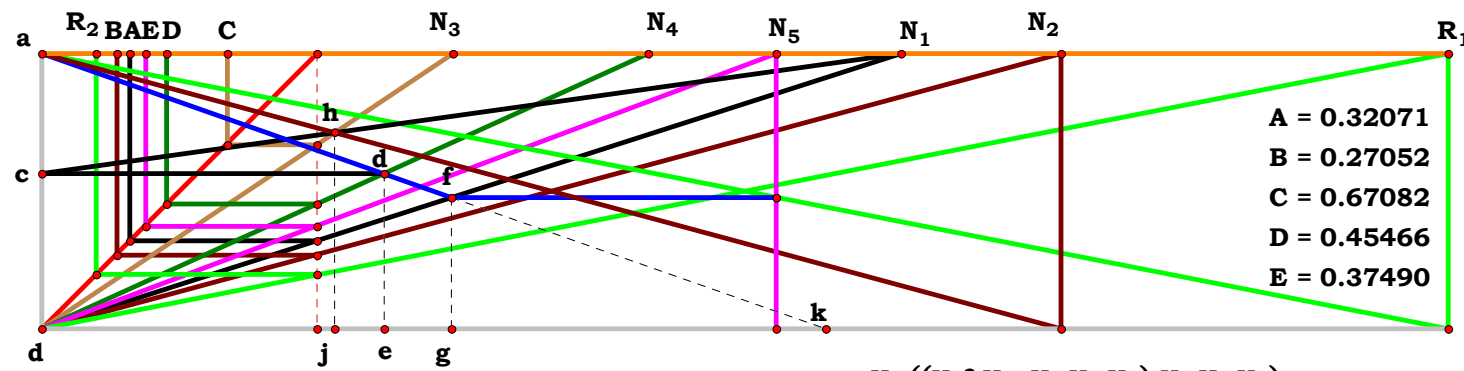
$$\mathbf{bk} := \frac{\mathbf{be}}{\mathbf{ac}} \qquad \mathbf{fg} := \frac{\mathbf{bk}}{\mathbf{N_1 + bk}}$$

$$\mathbf{R}_1 := \frac{\mathbf{N}_5}{(1 - \mathbf{fg})} \quad \mathbf{R}_1 = 5.102458$$

$$R_1 - \frac{N_5 \cdot (N_1^2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4 - N_2 \cdot N_3 \cdot N_4)}{N_1^2 \cdot N_3} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0 \quad N_4 - \frac{1}{D} = 0 \quad N_5 - \frac{1}{E} = 0$$

$$\mathbf{R}_1 - \frac{(\mathbf{C} \cdot \mathbf{A} - \mathbf{A}^2 + \mathbf{B} \cdot \mathbf{D})}{\mathbf{B} \cdot \mathbf{D} \cdot \mathbf{E}} = 0$$



$$R_1 - \frac{N_5 \cdot ((N_1^2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4)}{N_1^2 \cdot N_3} = 0.00000$$

$$R_1 - \frac{((A \cdot C - A^2) + B \cdot D)}{(B \cdot D \cdot E)} = 0.00000$$

$$\frac{((A \cdot C - A^2) + B \cdot D)}{(B \cdot D \cdot E)} - \frac{N_5 \cdot ((N_1^2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4)}{N_1^2 \cdot N_3} = 0.00000$$

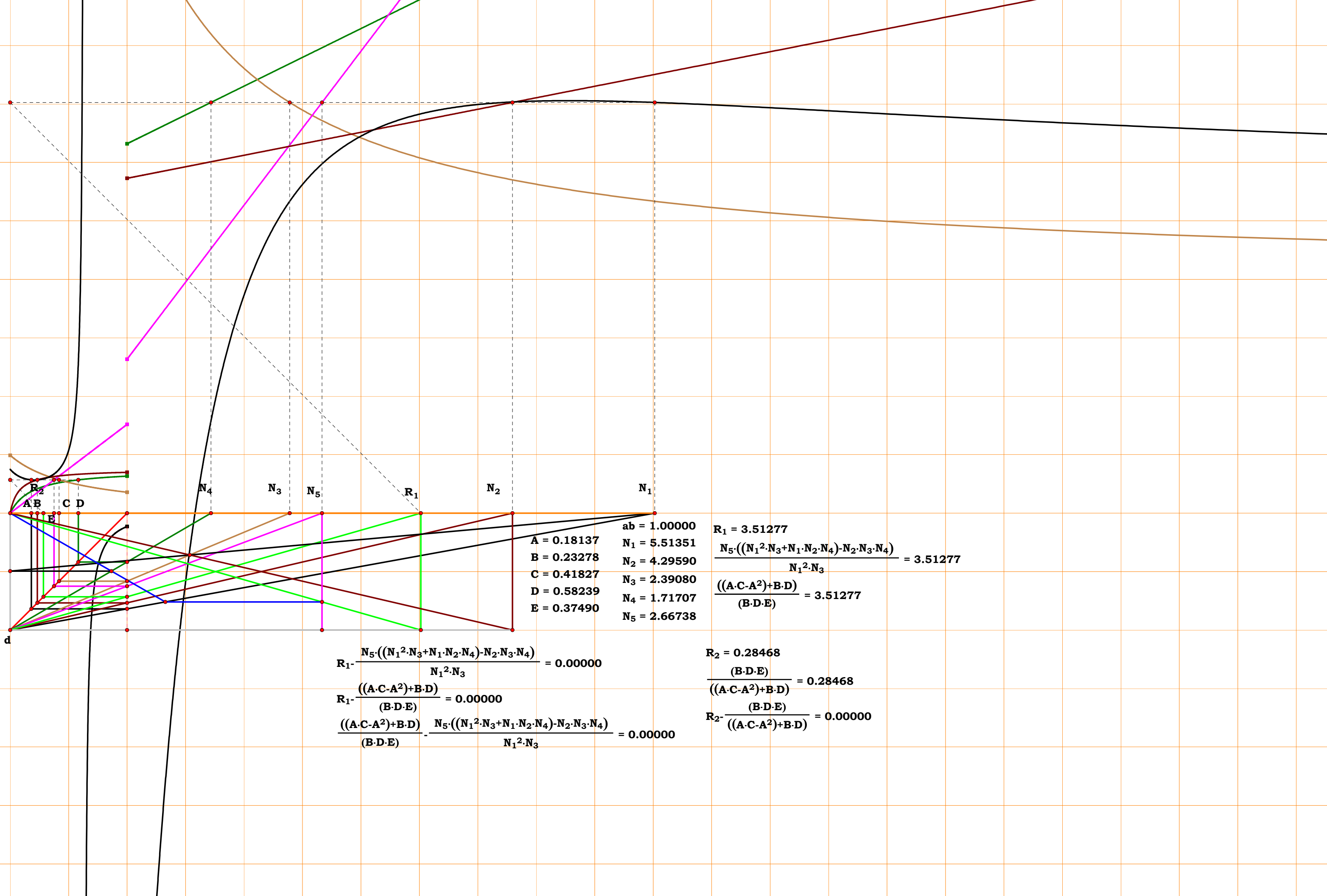
$$N_F = 2.66738$$

$$\frac{N_5 \cdot ((N_1^2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4)}{N_1^2 \cdot N_3} = 5.10246$$

$$\frac{((A \cdot C - A^2) + B \cdot D)}{(B \cdot D \cdot E)} = 5.10246$$

$$\frac{R_2}{((A \cdot G \cdot A^2) \cdot B \cdot D)} = 0.19598$$

$$R_2 - \frac{(B \cdot D \cdot E)}{((A \cdot C - A^2) + B \cdot D)} = 0.00000$$



A = 0.18137  
B = 0.23278  
C = 0.41827  
D = 0.58239  
E = 0.37490

ab = 1.00000  
N<sub>1</sub> = 5.51351  
N<sub>2</sub> = 4.29590  
N<sub>3</sub> = 2.39080  
N<sub>4</sub> = 1.71707  
N<sub>5</sub> = 2.66738

$$R_1 = 3.51277$$
$$\frac{N_5 \cdot ((N_1^2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4)}{N_1^2 \cdot N_3} = 3.51277$$
$$\frac{((A \cdot C - A^2) + B \cdot D)}{(B \cdot D \cdot E)} = 3.51277$$

$$R_1 - \frac{N_5 \cdot ((N_1^2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4)}{N_1^2 \cdot N_3} = 0.00000$$

$$R_1 - \frac{((A \cdot C - A^2) + B \cdot D)}{(B \cdot D \cdot E)} = 0.00000$$

$$\frac{((A \cdot C - A^2) + B \cdot D)}{(B \cdot D \cdot E)} - \frac{N_5 \cdot ((N_1^2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4)}{N_1^2 \cdot N_3} = 0.00000$$

$$R_2 = 0.28468$$

$$\frac{(B \cdot D \cdot E)}{((A \cdot C - A^2) + B \cdot D)} = 0.28468$$

$$R_2 - \frac{(B \cdot D \cdot E)}{((A \cdot C - A^2) + B \cdot D)} = 0.00000$$



1CST7R7

Given.

Unit.  $ab := 1$      $N_1 := 4.49660$

$N_2 := 3.08990$      $N_3 := 2.08183$

$N_4 := 1.17463$      $N_5 := 2.40079$      $N_6 := 1.57009$

$A := \frac{1}{N_1}$      $B := \frac{1}{N_2}$      $C := \frac{1}{N_3}$      $D := \frac{1}{N_4}$      $E := \frac{1}{N_5}$      $F := \frac{1}{N_6}$

Descriptions.

$fg := \frac{N_2}{N_2 + N_3}$      $bg := fg \cdot N_3$      $ac := \frac{N_1 \cdot (1 - fg)}{N_1 - bg}$

$be := N_4 \cdot (1 - ac)$      $bn := \frac{be}{ac}$      $hj := \frac{bn}{bn + N_1}$

$bp := N_5 \cdot (1 - hj)$      $km := \frac{N_6 \cdot hj}{bp}$      $R_1 := \frac{N_6}{1 - km}$

$R_1 = 1.817589$

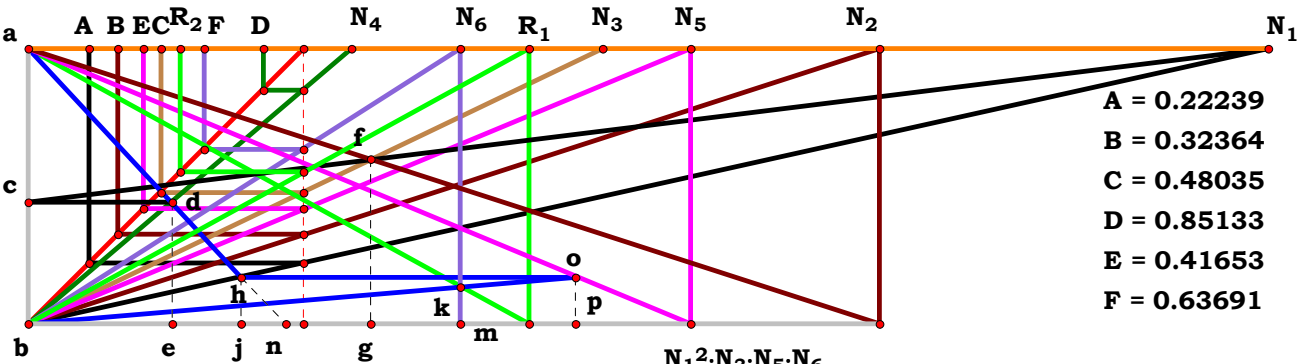
Definitions.

$R_1 - \frac{N_1^2 \cdot N_3 \cdot N_5 \cdot N_6}{N_1^2 \cdot N_3 \cdot N_5 - N_1 \cdot N_2 \cdot N_4 \cdot N_6 + N_2 \cdot N_3 \cdot N_4 \cdot N_6} = 0$

$N_1 - \frac{1}{A} = 0$      $N_2 - \frac{1}{B} = 0$      $N_3 - \frac{1}{C} = 0$

$N_4 - \frac{1}{D} = 0$      $N_5 - \frac{1}{E} = 0$      $N_6 - \frac{1}{F} = 0$

$R_1 - \frac{B \cdot D}{E \cdot A^2 - C \cdot E \cdot A + B \cdot D \cdot F} = 0$



$A = 0.22239$   
 $B = 0.32364$   
 $C = 0.48035$   
 $D = 0.85133$   
 $E = 0.41653$   
 $F = 0.63691$

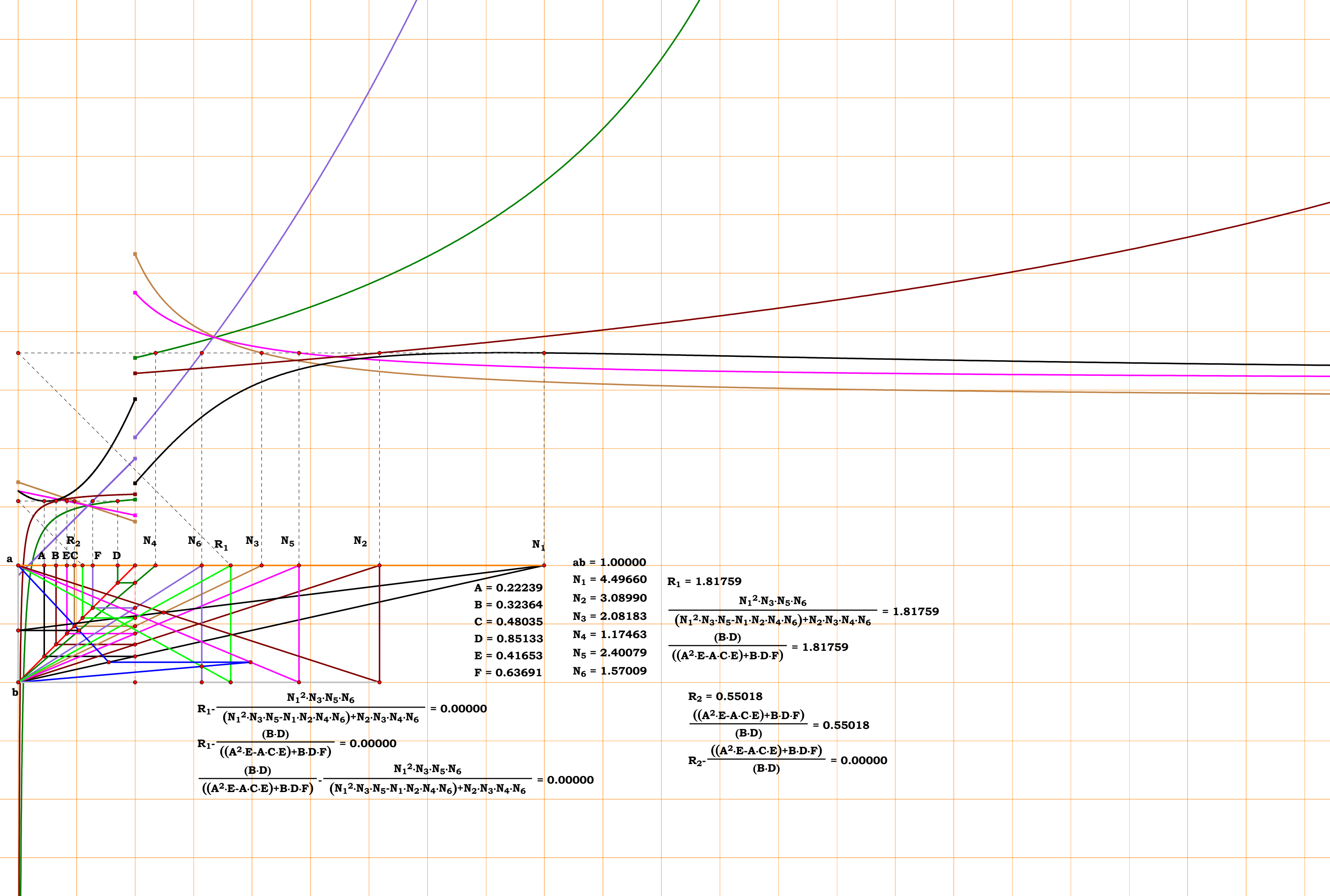
$ab = 1.00000$   
 $N_1 = 4.49660$   
 $N_2 = 3.08990$   
 $N_3 = 2.08183$   
 $N_4 = 1.17463$   
 $N_5 = 2.40079$   
 $N_6 = 1.57009$

$R_1 - \frac{N_1^2 \cdot N_3 \cdot N_5 \cdot N_6}{(N_1^2 \cdot N_3 \cdot N_5 - N_1 \cdot N_2 \cdot N_4 \cdot N_6) + N_2 \cdot N_3 \cdot N_4 \cdot N_6} = 0.00000$   
 $R_1 - \frac{(B \cdot D)}{((A^2 \cdot E - A \cdot C \cdot E) + B \cdot D \cdot F)} = 0.00000$   
 $\frac{(B \cdot D)}{((A^2 \cdot E - A \cdot C \cdot E) + B \cdot D \cdot F)} - \frac{N_1^2 \cdot N_3 \cdot N_5 \cdot N_6}{(N_1^2 \cdot N_3 \cdot N_5 - N_1 \cdot N_2 \cdot N_4 \cdot N_6) + N_2 \cdot N_3 \cdot N_4 \cdot N_6} = 0.00000$

$R_1 = 1.81759$   
 $\frac{N_1^2 \cdot N_3 \cdot N_5 \cdot N_6}{(N_1^2 \cdot N_3 \cdot N_5 - N_1 \cdot N_2 \cdot N_4 \cdot N_6) + N_2 \cdot N_3 \cdot N_4 \cdot N_6} = 1.81759$   
 $\frac{(B \cdot D)}{((A^2 \cdot E - A \cdot C \cdot E) + B \cdot D \cdot F)} = 1.81759$

$R_2 = 0.55018$   
 $\frac{((A^2 \cdot E - A \cdot C \cdot E) + B \cdot D \cdot F)}{(B \cdot D)} = 0.55018$

$R_2 - \frac{((A^2 \cdot E - A \cdot C \cdot E) + B \cdot D \cdot F)}{(B \cdot D)} = 0.00000$



a

b

A B EC F D

N<sub>4</sub>

N<sub>6</sub>

R<sub>1</sub>

N<sub>3</sub>

N<sub>5</sub>

N<sub>2</sub>

N<sub>1</sub>

A = 0.22239  
B = 0.32364  
C = 0.48035  
D = 0.85133  
E = 0.41653  
F = 0.63691

ab = 1.00000  
N<sub>1</sub> = 4.49660  
N<sub>2</sub> = 3.08990  
N<sub>3</sub> = 2.08183  
N<sub>4</sub> = 1.17463  
N<sub>5</sub> = 2.40079  
N<sub>6</sub> = 1.57009

$$R_1 - \frac{N_1^2 \cdot N_3 \cdot N_5 \cdot N_6}{(N_1^2 \cdot N_3 \cdot N_5 - N_1 \cdot N_2 \cdot N_4 \cdot N_6) + N_2 \cdot N_3 \cdot N_4 \cdot N_6} = 0.00000$$

$$R_1 - \frac{(B \cdot D)}{((A^2 \cdot E - A \cdot C \cdot E) + B \cdot D \cdot F)} = 0.00000$$

$$\frac{(B \cdot D)}{((A^2 \cdot E - A \cdot C \cdot E) + B \cdot D \cdot F)} - \frac{N_1^2 \cdot N_3 \cdot N_5 \cdot N_6}{(N_1^2 \cdot N_3 \cdot N_5 - N_1 \cdot N_2 \cdot N_4 \cdot N_6) + N_2 \cdot N_3 \cdot N_4 \cdot N_6} = 0.00000$$

R<sub>1</sub> = 1.81759

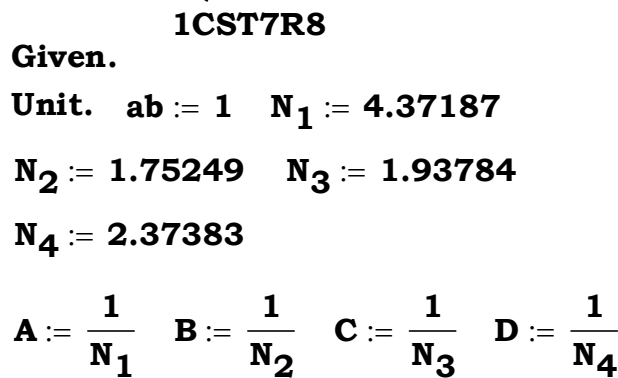
$$\frac{N_1^2 \cdot N_3 \cdot N_5 \cdot N_6}{(N_1^2 \cdot N_3 \cdot N_5 - N_1 \cdot N_2 \cdot N_4 \cdot N_6) + N_2 \cdot N_3 \cdot N_4 \cdot N_6} = 1.81759$$

$$\frac{(B \cdot D)}{((A^2 \cdot E - A \cdot C \cdot E) + B \cdot D \cdot F)} = 1.81759$$

R<sub>2</sub> = 0.55018

$$\frac{((A^2 \cdot E - A \cdot C \cdot E) + B \cdot D \cdot F)}{(B \cdot D)} = 0.55018$$

$$R_2 - \frac{((A^2 \cdot E - A \cdot C \cdot E) + B \cdot D \cdot F)}{(B \cdot D)} = 0.00000$$



**Unit.**  $\mathbf{ab} := 1 \quad \mathbf{N}_1 := 4.37187$

$$\mathbf{N}_2 := 1.75249 \quad \mathbf{N}_3 := 1.93784$$

$$\mathbf{N}_4 := 2.37383$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3} \quad \mathbf{D} := \frac{1}{N_4}$$

### Descriptions.

$$\mathbf{de} := \frac{\mathbf{N}_3}{\mathbf{N}_3 + \mathbf{N}_4} \quad \mathbf{ad} := \mathbf{N}_4 \cdot \mathbf{de}$$

$$\mathbf{ac} := \frac{\mathbf{de} \cdot \mathbf{N}_1}{\mathbf{N}_1 - \mathbf{ad}} \quad \mathbf{R}_1 := \frac{\mathbf{N}_2}{\mathbf{ac}}$$

$$\mathbf{R}_1 = 2.947705$$

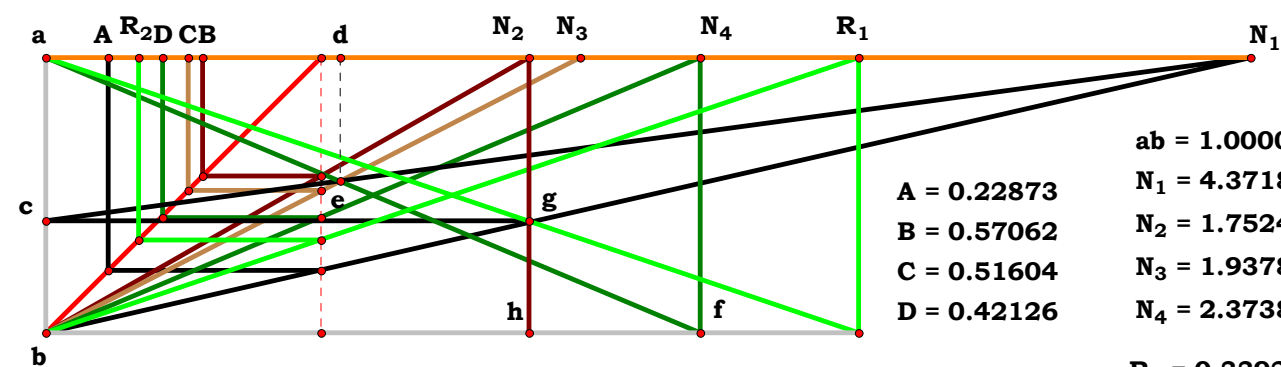
### Definitions.

$$R_1 - \frac{N_1 \cdot N_2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4 - N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_3} = 0$$

$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0$$

$$N_3 - \frac{1}{C} = 0 \quad N_4 - \frac{1}{D} = 0$$

$$\mathbf{R}_1 - \frac{(\mathbf{C} - \mathbf{A} + \mathbf{D})}{\mathbf{B} \cdot \mathbf{D}} = 0$$



$$R_1 - \frac{(N_1 \cdot N_2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_3} = 0.00000$$

$$R_1 - \frac{((C-A)+D)}{(B \cdot D)} = 0.00000$$

$$\frac{((C-A)+D)}{(B \cdot D)} - \frac{(N_1 \cdot N_2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_3} = 0.00000$$

**ab = 1.00000**

$$N_1 = 4.37187$$

$$N_2 = 1.75249$$

$$N_3 = 1.93784$$

$$N_4 = 2.37383$$

$$R_2 = 0.33925$$

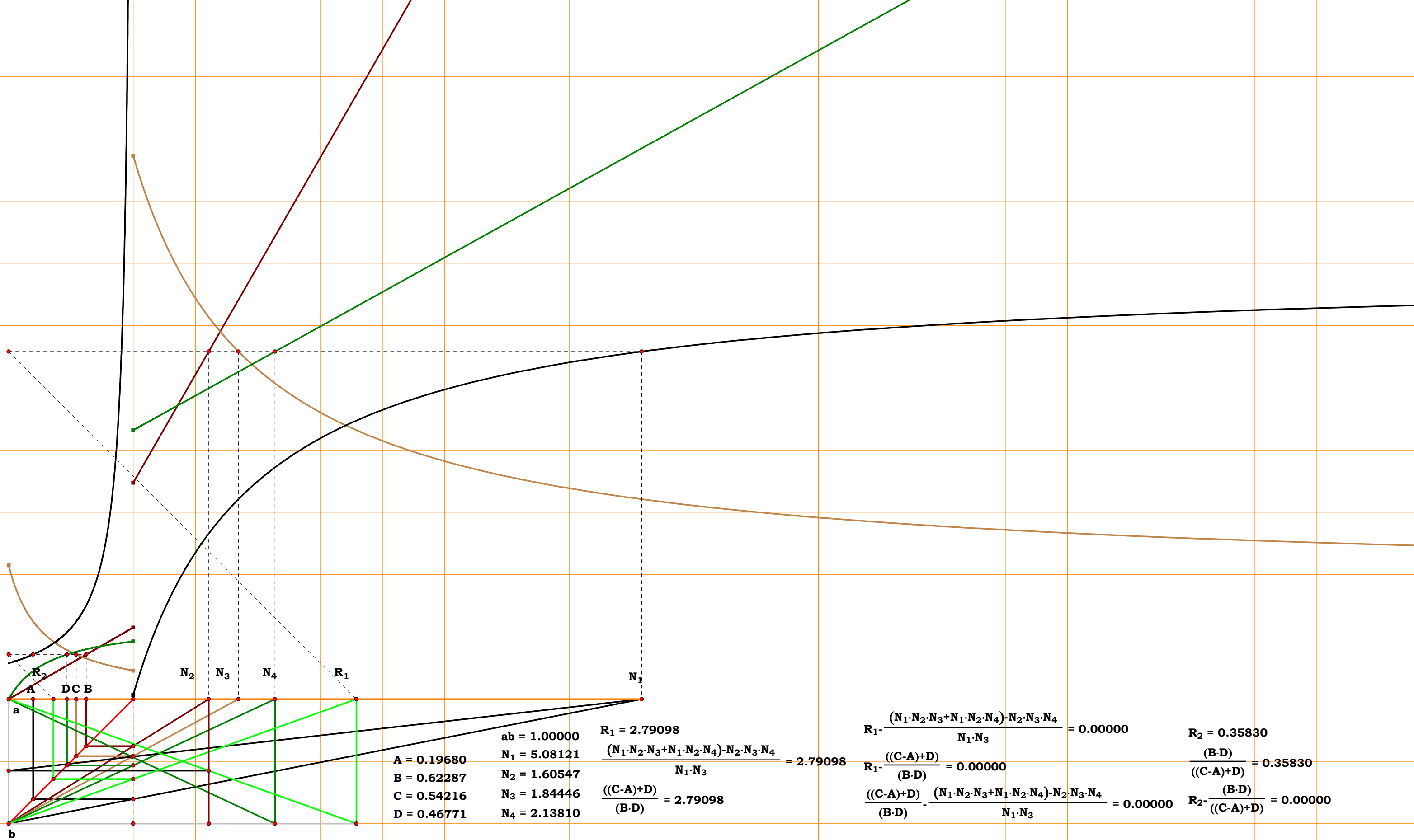
$$\frac{(B \cdot D)}{((C - A) + D)} = 0.33925$$

$$R_2 - \frac{(B \cdot D)}{((C - A) + D)} = 0.00000$$

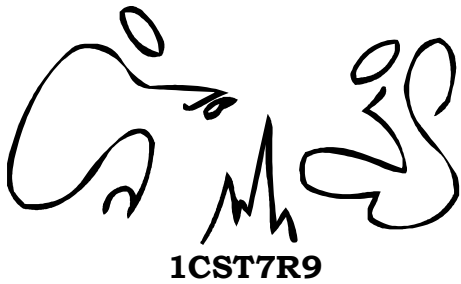
$$R_1 = 2.94770$$

$$\frac{(N_1 \cdot N_2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_3} = 2.94770$$

$$\frac{((C-A)+D)}{(B-D)} = 2.94770$$







Given.

Unit.  $ab := 1$     $N_1 := 3.66705$

$N_2 := 1.36495$     $N_3 := 2.71296$     $N_4 := 2.09224$

$A := \frac{1}{N_1}$     $B := \frac{1}{N_2}$     $C := \frac{1}{N_3}$     $D := \frac{1}{N_4}$

Descriptions.

$af := \frac{N_2 \cdot N_3}{N_2 + N_3}$     $fg := \frac{af}{N_3}$

$ac := \frac{fg \cdot N_1}{N_1 - af}$     $de := 1 - ac$

$be := N_4 \cdot ac$     $R_1 := \frac{be}{de}$     $R_1 = 1.676785$

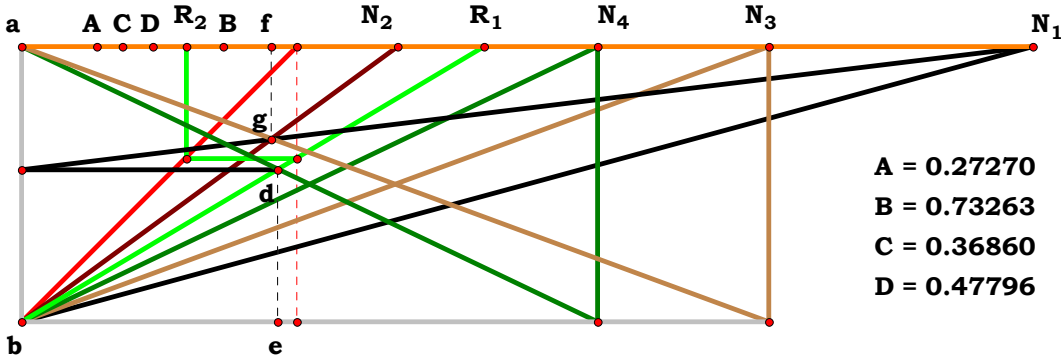
Definitions.

$R_1 - \frac{N_1 \cdot N_2 \cdot N_4}{N_1 \cdot N_3 - N_2 \cdot N_3} = 0$

$N_1 - \frac{1}{A} = 0$     $N_2 - \frac{1}{B} = 0$

$N_3 - \frac{1}{C} = 0$     $N_4 - \frac{1}{D} = 0$

$R_1 - \frac{C}{D \cdot (B - A)} = 0$



$A = 0.27270$   
 $B = 0.73263$   
 $C = 0.36860$   
 $D = 0.47796$

$ab = 1.00000$   
 $N_1 = 3.66705$   
 $N_2 = 1.36495$   
 $N_3 = 2.71296$   
 $N_4 = 2.09224$

$R_1 = 1.67679$   
 $\frac{N_1 \cdot N_2 \cdot N_4}{N_1 \cdot N_3 - N_2 \cdot N_3} = 1.67679$   
 $\frac{C}{(D \cdot (B - A))} = 1.67679$

$R_1 - \frac{N_1 \cdot N_2 \cdot N_4}{N_1 \cdot N_3 - N_2 \cdot N_3} = 0.00000$

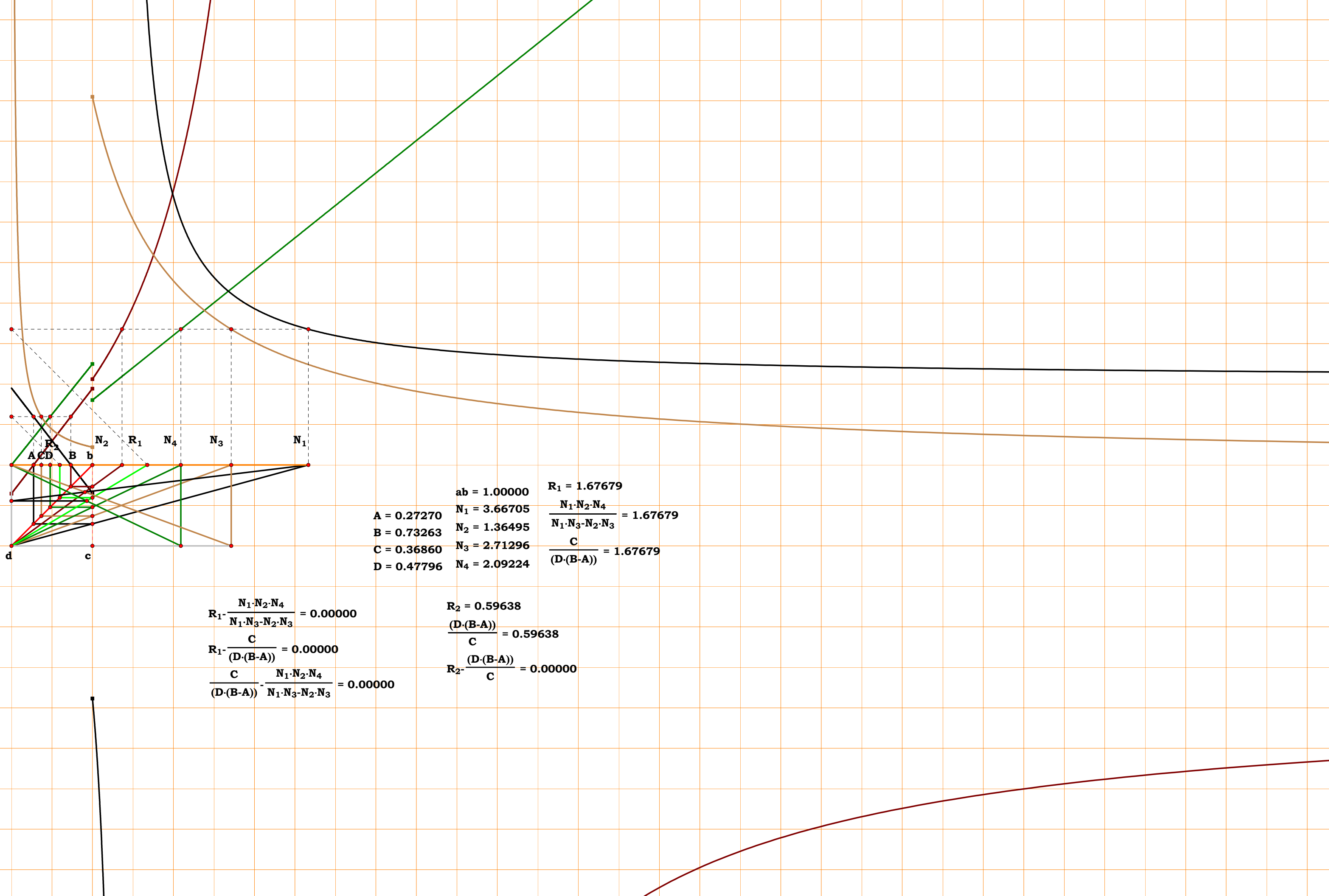
$R_1 - \frac{C}{(D \cdot (B - A))} = 0.00000$

$\frac{C}{(D \cdot (B - A))} - \frac{N_1 \cdot N_2 \cdot N_4}{N_1 \cdot N_3 - N_2 \cdot N_3} = 0.00000$

$R_2 = 0.59638$

$\frac{(D \cdot (B - A))}{C} = 0.59638$

$R_2 - \frac{(D \cdot (B - A))}{C} = 0.00000$



	$ab = 1.00000$	$R_1 = 1.67679$
$A = 0.27270$	$N_1 = 3.66705$	$\frac{N_1 \cdot N_2 \cdot N_4}{N_1 \cdot N_3 - N_2 \cdot N_3} = 1.67679$
$B = 0.73263$	$N_2 = 1.36495$	
$C = 0.36860$	$N_3 = 2.71296$	$\frac{C}{(D \cdot (B - A))} = 1.67679$
$D = 0.47796$	$N_4 = 2.09224$	

$R_1 - \frac{N_1 \cdot N_2 \cdot N_4}{N_1 \cdot N_3 - N_2 \cdot N_3} = 0.00000$	$R_2 = 0.59638$
$R_1 - \frac{C}{(D \cdot (B - A))} = 0.00000$	$\frac{(D \cdot (B - A))}{C} = 0.59638$
$\frac{C}{(D \cdot (B - A))} - \frac{N_1 \cdot N_2 \cdot N_4}{N_1 \cdot N_3 - N_2 \cdot N_3} = 0.00000$	$R_2 - \frac{(D \cdot (B - A))}{C} = 0.00000$



1CST7R10

Given.

Unit.  $ab := 1$

$N_1 := 3.30816$   $N_2 := 2.26747$

$N_3 := 1.38991$   $N_4 := 1.88380$

$A := \frac{1}{N_1}$   $B := \frac{1}{N_2}$   $C := \frac{1}{N_3}$   $D := \frac{1}{N_4}$

Descriptions.

$de := \frac{N_3}{N_3 + N_4}$   $ad := N_4 \cdot de$

$ac := \frac{de \cdot N_1}{N_1 - ad}$   $R_1 := \frac{N_2}{1 - ac}$

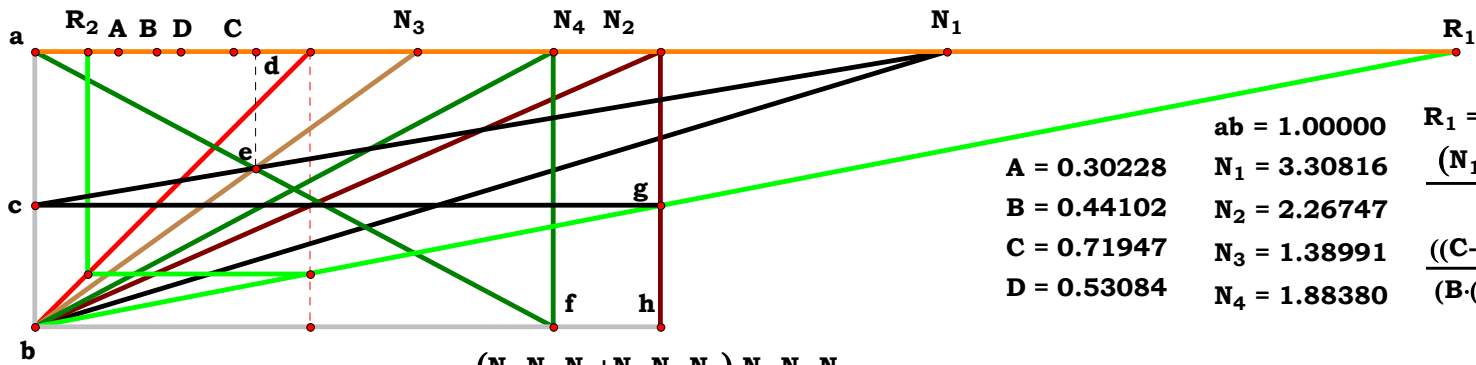
$R_1 = 5.152662$

Definitions.

$R_1 - \frac{N_1 \cdot N_2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4 - N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_3 \cdot N_4} = 0$

$N_1 - \frac{1}{A} = 0$   $N_2 - \frac{1}{B} = 0$   $N_3 - \frac{1}{C} = 0$   $N_4 - \frac{1}{D} = 0$

$R_1 - \frac{(C - A + D)}{B \cdot (C - A)} = 0$



$A = 0.30228$   
 $B = 0.44102$   
 $C = 0.71947$   
 $D = 0.53084$

$ab = 1.00000$   
 $N_1 = 3.30816$   
 $N_2 = 2.26747$   
 $N_3 = 1.38991$   
 $N_4 = 1.88380$

$R_1 = 5.15265$   
 $\frac{(N_1 \cdot N_2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_3 \cdot N_4} = 5.15265$   
 $\frac{((C - A) + D)}{(B \cdot (C - A))} = 5.15265$

$R_1 - \frac{(N_1 \cdot N_2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_3 \cdot N_4} = 0.00000$

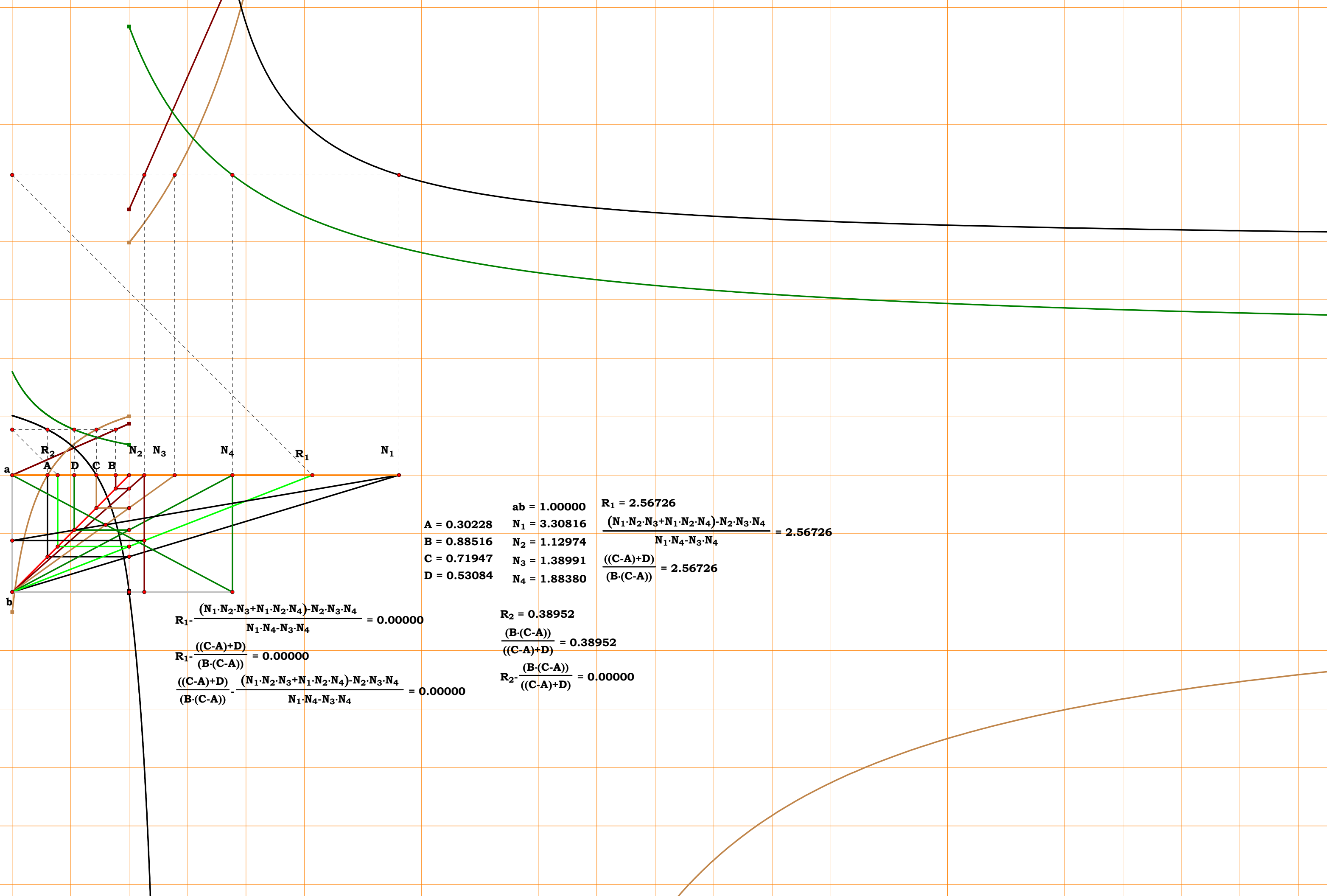
$R_1 - \frac{((C - A) + D)}{(B \cdot (C - A))} = 0.00000$

$\frac{((C - A) + D)}{(B \cdot (C - A))} - \frac{(N_1 \cdot N_2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 - N_3 \cdot N_4} = 0.00000$

$R_2 = 0.19407$

$\frac{(B \cdot (C - A))}{((C - A) + D)} = 0.19407$

$R_2 - \frac{(B \cdot (C - A))}{((C - A) + D)} = 0.00000$



	$ab = 1.00000$	$R_1 = 2.56726$
$A = 0.30228$	$N_1 = 3.30816$	$\frac{(N_1 \cdot N_2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 \cdot N_3 \cdot N_4} = 2.56726$
$B = 0.88516$	$N_2 = 1.12974$	
$C = 0.71947$	$N_3 = 1.38991$	$\frac{((C-A)+D)}{(B \cdot (C-A))} = 2.56726$
$D = 0.53084$	$N_4 = 1.88380$	

$R_1 - \frac{(N_1 \cdot N_2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 \cdot N_3 \cdot N_4} = 0.00000$	$R_2 = 0.38952$
$R_1 - \frac{((C-A)+D)}{(B \cdot (C-A))} = 0.00000$	$\frac{(B \cdot (C-A))}{((C-A)+D)} = 0.38952$
$\frac{((C-A)+D)}{(B \cdot (C-A))} - \frac{(N_1 \cdot N_2 \cdot N_3 + N_1 \cdot N_2 \cdot N_4) - N_2 \cdot N_3 \cdot N_4}{N_1 \cdot N_4 \cdot N_3 \cdot N_4} = 0.00000$	$R_2 - \frac{(B \cdot (C-A))}{((C-A)+D)} = 0.00000$

**1CST7R11**

**Unit.**   **ab** := 1      **N<sub>1</sub>** := 2.71360

$$\mathbf{N}_4 := 1.16394 \quad \mathbf{N}_5 := 1.31148$$

$$\mathbf{A} := \frac{1}{N_1} \quad \mathbf{B} := \frac{1}{N_2} \quad \mathbf{C} := \frac{1}{N_3} \quad \mathbf{D} := \frac{1}{N_4} \quad \mathbf{E} := \frac{1}{N_5}$$

$$\mathbf{fg} := \frac{N_2}{N_2 + N_3} \quad \mathbf{bg} := N_3 \cdot \mathbf{fg} \quad \mathbf{ac} := \frac{N_1 \cdot (1 - \mathbf{fg})}{N_1 - \mathbf{bg}}$$

$$\mathbf{be} := \mathbf{N_4} \cdot (1 - \mathbf{ac}) \quad \mathbf{bp} := \frac{\mathbf{be}}{\mathbf{ac}} \quad \mathbf{hj} := \frac{\mathbf{bp}}{\mathbf{bp} + \mathbf{N_1}}$$

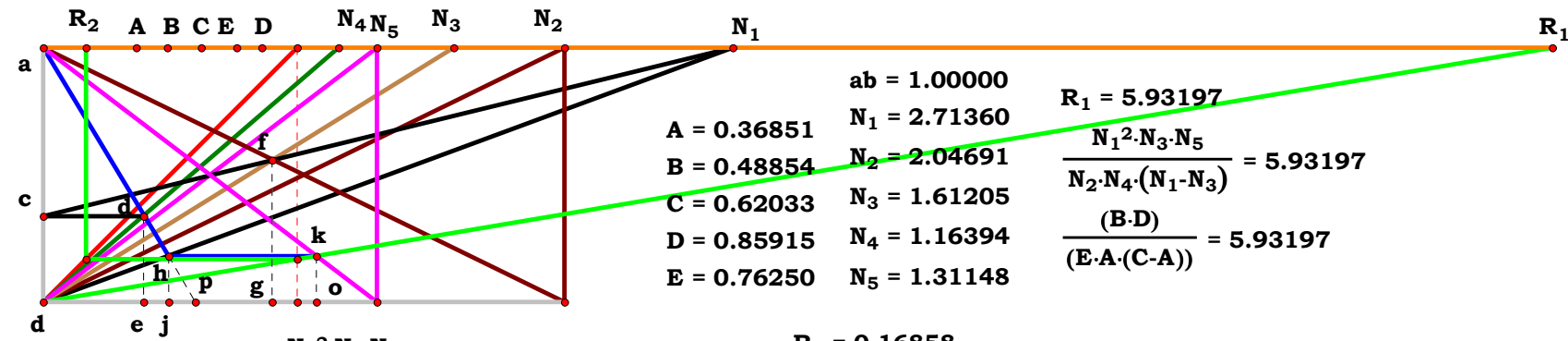
$$\mathbf{bo} := \mathbf{N}_5 \cdot (1 - \mathbf{hj}) \quad \mathbf{R}_1 := \frac{\mathbf{bo}}{\mathbf{hj}}$$

$$\mathbf{R}_1 = 5.931961$$

$$R_1 - \frac{N_1^2 \cdot N_3 \cdot N_5}{N_2 \cdot N_4 \cdot (N_1 - N_3)} = 0$$

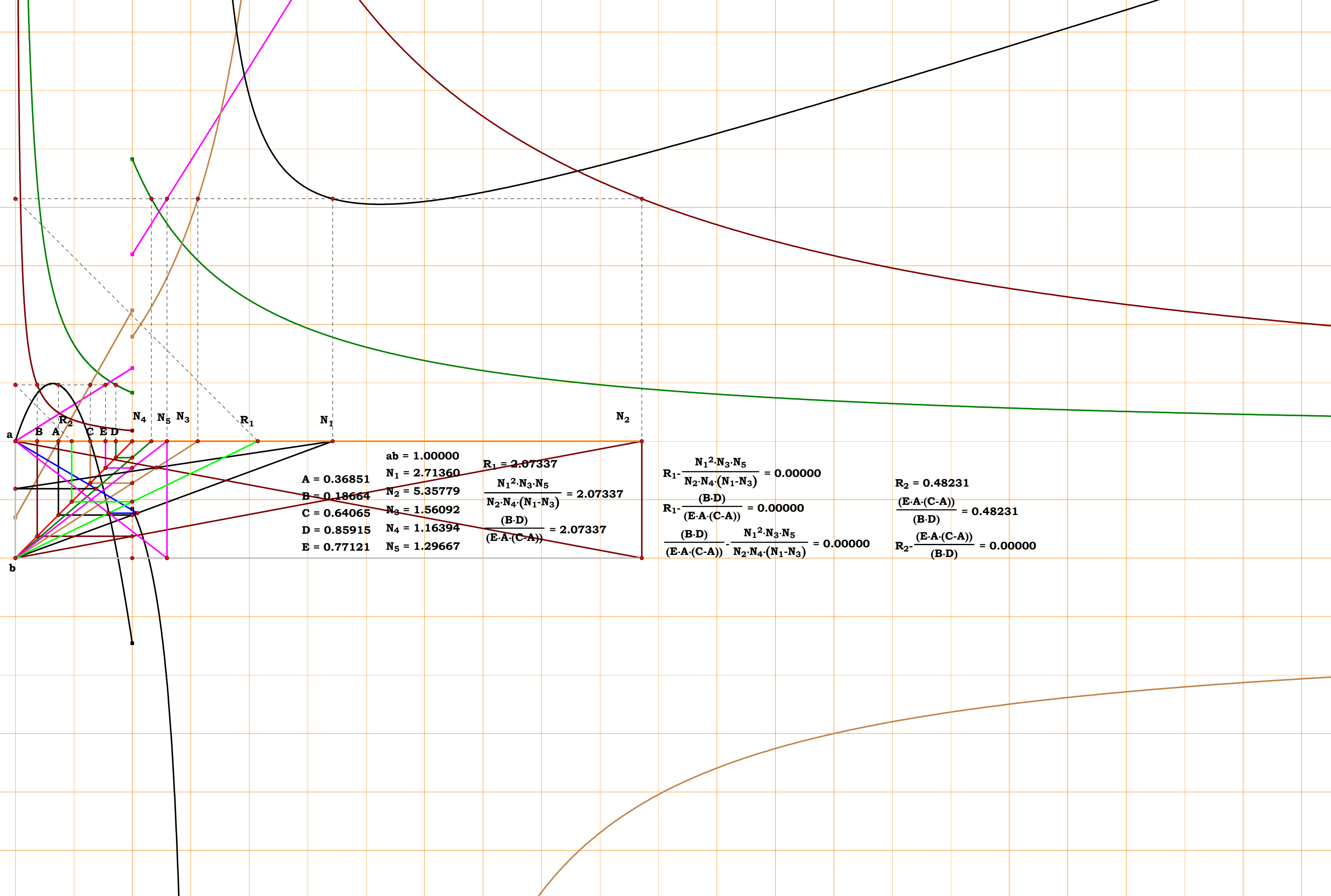
$$N_1 - \frac{1}{A} = 0 \quad N_2 - \frac{1}{B} = 0 \quad N_3 - \frac{1}{C} = 0 \quad N_4 - \frac{1}{D} = 0 \quad N_5 - \frac{1}{E} = 0$$

$$\mathbf{R}_1 - \frac{\mathbf{B} \cdot \mathbf{D}}{\mathbf{E} \cdot [\mathbf{A} \cdot (\mathbf{C} - \mathbf{A})]} = 0$$



$$\begin{aligned} R_1 \cdot \frac{N_1^2 \cdot N_3 \cdot N_5}{N_2 \cdot N_4 \cdot (N_1 - N_3)} &= 0.00000 \\ R_1 \cdot \frac{(B \cdot D)}{(E \cdot A \cdot (C - A))} &= 0.00000 \\ \frac{(B \cdot D)}{(E \cdot A \cdot (C - A))} - \frac{N_1^2 \cdot N_3 \cdot N_5}{N_2 \cdot N_4 \cdot (N_1 - N_3)} &= 0.00000 \end{aligned}$$

$$R_2 = 0.16858$$
$$\frac{(E \cdot A \cdot (C - A))}{(B \cdot D)} = 0.16858$$
$$R_2 - \frac{(E \cdot A \cdot (C - A))}{(B \cdot D)} = 0.00000$$





1CST7R12

Given.

Unit.  $ab := 1$     $N_1 := 2.81836$

$N_2 := 3.90075$     $N_3 := 1.99938$

$N_4 := 1.57843$     $N_5 := 1.21882$

$A := \frac{1}{N_1}$     $B := \frac{1}{N_2}$     $C := \frac{1}{N_3}$     $D := \frac{1}{N_4}$     $E := \frac{1}{N_5}$

Descriptions.

$fg := \frac{N_2}{N_2 + N_3}$     $bg := fg \cdot N_3$     $ac := \frac{N_1 \cdot (1 - fg)}{N_1 - bg}$

$be := N_4 \cdot (1 - ac)$     $bo := \frac{be}{ac}$     $hj := \frac{bo}{bo + N_1}$

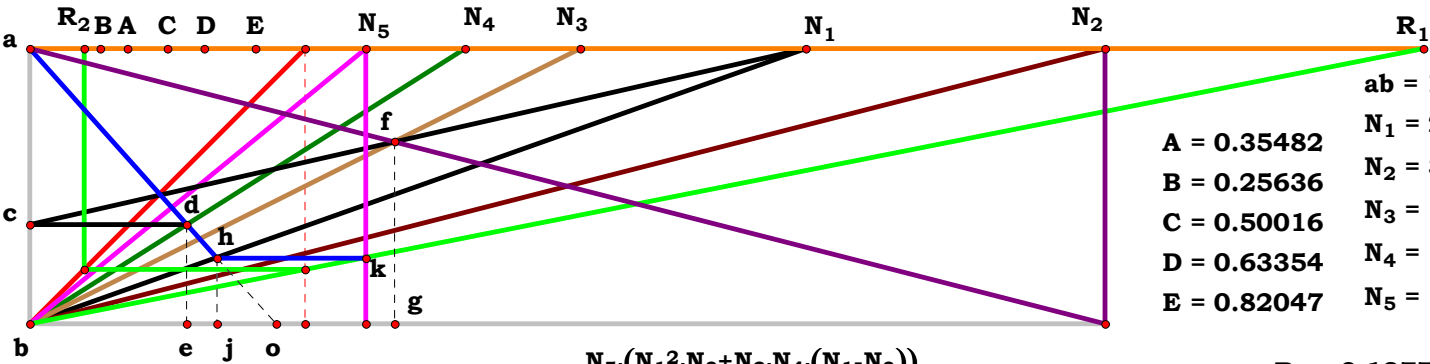
$R_1 := \frac{N_5}{hj}$     $R_1 = 5.057493$

Definitions.

$R_1 - \frac{N_5 \cdot \left[ N_1^2 \cdot N_3 + N_2 \cdot N_4 \cdot (N_1 - N_3) \right]}{N_2 \cdot N_4 \cdot (N_1 - N_3)} = 0$

$N_1 - \frac{1}{A} = 0$     $N_2 - \frac{1}{B} = 0$     $N_3 - \frac{1}{C} = 0$     $N_4 - \frac{1}{D} = 0$     $N_5 - \frac{1}{E} = 0$

$R_1 - \frac{\left( A^2 - C \cdot A - B \cdot D \right)}{A \cdot E \cdot (A - C)} = 0$



$ab = 1.00000$   
 $N_1 = 2.81836$   
 $N_2 = 3.90075$   
 $N_3 = 1.99938$   
 $N_4 = 1.57843$   
 $N_5 = 1.21882$   
 $A = 0.35482$   
 $B = 0.25636$   
 $C = 0.50016$   
 $D = 0.63354$   
 $E = 0.82047$

$R_1 = 5.05749$   
 $\frac{N_5 \cdot (N_1^2 \cdot N_3 + N_2 \cdot N_4 \cdot (N_1 - N_3))}{N_2 \cdot N_4 \cdot (N_1 - N_3)} = 5.05749$   
 $\frac{(A^2 - A \cdot C - B \cdot D)}{(A \cdot E \cdot (A - C))} = 5.05749$

$R_1 - \frac{N_5 \cdot (N_1^2 \cdot N_3 + N_2 \cdot N_4 \cdot (N_1 - N_3))}{N_2 \cdot N_4 \cdot (N_1 - N_3)} = 0.00000$   
 $R_1 - \frac{(A^2 - A \cdot C - B \cdot D)}{(A \cdot E \cdot (A - C))} = 0.00000$   
 $\frac{(A^2 - A \cdot C - B \cdot D)}{(A \cdot E \cdot (A - C))} - \frac{N_5 \cdot (N_1^2 \cdot N_3 + N_2 \cdot N_4 \cdot (N_1 - N_3))}{N_2 \cdot N_4 \cdot (N_1 - N_3)} = 0.00000$

$R_2 = 0.19773$   
 $\frac{(A \cdot E \cdot (A - C))}{(A^2 - A \cdot C - B \cdot D)} = 0.19773$   
 $R_2 - \frac{(A \cdot E \cdot (A - C))}{(A^2 - A \cdot C - B \cdot D)} = 0.00000$

